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AN  
ILLUSTRATED WEEKLY JOURNAL

OF

HORTICULTURE IN ALL ITS BRANCHES.

FOUNDED BY

*W. Robinson, Author of the "English Flower Garden."*

"You see, sweet maid, we marry  
A gentler scion to the wildest stock ;  
And make conceive a bark of baser kind  
By bud of nobler race : This is an art  
Which does mend Nature,—change it rather: but  
The art itself is nature."

*Shakespeare.*

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C  
Per

TO

EDOUARD F. ANDRÉ

(of Paris)

THE FORTY-SEVENTH VOLUME OF "THE GARDEN"

is dedicated,





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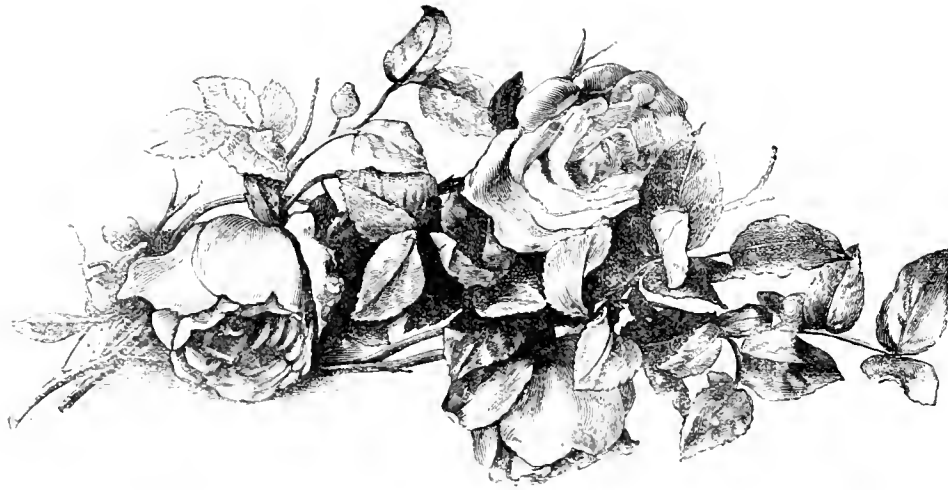
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# The GARDEN.

VOL. XLVII.

## ORCHARD AND FRUIT GARDEN

### NOTES ON GRAPES.

"C. N." at page 493 has some remarks on judging Grapes, which are of some importance to gardeners and others who exhibit Grapes, but they go further than this, for they open up, as it were, the whole question of judging. "C. N." adds: "Perhaps the judges were not acquainted with the quality of Royal Vineyard Grape, but they might soon have become so by tasting a berry or two." The contention is that the Muscat Grapes were inferior in quality to what Muscats ought to have been, and that the bunches of Royal Vineyard were good, well-finished bunches, while, to add to the other defects, many of the berries of the Muscats were shanked. Clearly, from the description given by "C. N.," Royal Vineyard should have been first, assuming that the prize was awarded, as it certainly ought to have been, for excellence of culture, for in truth Muscat of Alexandria is not such a very difficult Grape to manage, and if the fruit of it is but second or third-rate, it is no credit to the gardener. Of course, everything being equal, that is, the Muscats the best of their kind and the Royal Vineyard also of supreme quality, the latter would be almost sure to take a second place; but the matter assumes quite a different complexion when the Muscats are poor for Muscats, and the Grapes, whether Royal Vineyard or any other, superior in quality. The judges ought certainly to give the prize to the Grapes which give evidence of the most skilful culture. Most Grape growers will, I opine, back me up when I assert that it is more difficult to grow and finish off Royal Vineyard than it is the Muscat. The Vine itself is very vigorous, but the Grapes do not always set well; in fact, never, unless they have special treatment when in bloom. They require a minimum temperature of between 65° and 70° at that critical period; moreover, if the flowers are examined, the stigmatic portion of each will be quite covered with a globule of water, and if the hand is drawn over the bunch it will become quite wet. This must be done daily, as the globules are removed by this process, the pollen becomes attached to the stigma, and the fruit sets well. There is not much difficulty until the autumn, when the berries will crack badly close to the foot-stalks unless a dry,

rather warm atmosphere is maintained. All this demands a good deal of care and watchfulness, so that the gardener who shows good even bunches and berries of Royal Vineyard should be commended. I am well aware that Muscats also require care when they are in bloom and to be artificially fertilised, but the Grape and the details of its culture are well known to gardeners. It is certainly a great relief to judges when two classes are provided for white Grapes—one for Muscats and one for any other variety, because as a matter of fact no white Grapes can beat the old Muscat of Alexandria, all other conditions being equal; therefore, it is rather hard upon a gardener who may be a first-class Grape grower, but who does not grow Muscats, to find he has no chance to win when good Muscats are placed against any other white variety. I bought a plant of Royal Vineyard the first year it was sent out and have grown it under various conditions since, and my experience has led me to the conclusion that when it is well grown there is no other white Grape, except the Muscat, to equal it. It is never satisfactory unless it is managed as I have described above. I have tried Trebbiano, the Syrian and White Tokay, but have discarded all of them in favour of Royal Vineyard. Muscat of Alexandria has an entire house to itself. I used to grow Cannon Hall Muscat in this house, but it is too uncertain and has been discarded. It is now generally admitted that there is but one variety of Muscat for garden purposes, and the name Muscat of Alexandria has priority. The names Bowood Muscat, Tynningham Muscat, Tottenham Park Muscat, &c., are either seminal varieties differing in no respect from their parent, or the names have been given when the variety has done better than usual, it being supposed that it was owing to a difference in variety, whereas it was merely cultivation. At Loxford Hall some twenty-five or thirty years ago I planted a very fine house with Muscats, it being specially built for that purpose. I propagated my own plants from one Vine, and everything was done to make the Muscats a success, and they did very well. I had one or two Vines which were not required. One of these was planted in a corner of another house. The roots had only about a cubic yard of compost to work into, the Vine itself being trained into a Pine house and on the north aspect. The different conditions of culture had so altered the appearance of both bunches and

fruit that I had no difficulty in passing it off as a distinct variety. The berries always set better and the fruit produced was always superior. I believe Mr. Young, Mr. R. P. Brotherston and others of the correspondents of THE GARDEN who were under me at Loxford will remember this Vine. I do not take any credit to myself, as I never expected great results. I merely mention it as some evidence how old Grapes may be passed off as new on a credulous public. Most of us old gardeners remember Snow's Muscat Hamburg coming out, and subsequently Venn's Black Muscat. I have grown both and do not see any difference between them; both are synonymous with the Black Muscat of Alexandria.

There is some difference of opinion as to the best Grapes to grow in private gardens for home consumption. When I first started on my own responsibility as a head gardener I was eager to grow good Grapes and planted twenty-one varieties. A famous gardener remarked to me at the time that I had better reduce them to two—Muscat of Alexandria and Black Hamburg. These are certainly the two best, but it is better in a large establishment to grow a greater variety. I therefore advise for the early vinery Black Hamburg and one vine each of Buckland Sweetwater and Madresfield Court Black Muscat; for the Muscat house, Muscat of Alexandria only; and for the late house, Lady Downe's Seedling, one or two plants of Royal Vineyard and one or two of Mrs. Pince. Gros Colman, Alicante and Gros Maroc I have found wanting. They require more heat than the others; in fact, Gros Colman needs a house to itself to do it well, and it is not worth it. Of course, Grapes for market are a different matter. I am well aware of the popularity of Gros Colman as a market Grape. How long this popularity of certain inferior fruits may last is another matter. No Grape either for quality or long-keeping properties can vie with Lady Downe's Seedling. I have had it in capital condition since November, and it will last until May; indeed, I have had fairly good fruit in June, but it is not wanted after May. J. DOUGLAS.

**Pear Duchesse de Bordeaux.** — This Pear is very little known. I saw it in splendid condition this season trained against a wall, very small trees bearing freely. This is a January Pear, therefore more valuable. It is of a rich melting flavour, and was given a first-class certificate by the Royal Horticultural Society. It was shown at the Pear conference at Chiswick and

much admired. The fruits are above medium size, yellow, and covered with russet spots. Some very fine dishes were shown at the recent fruit exhibition at the Crystal Palace.—S. H. B.

**Grapes cracking.**—A fertile source of cracking in some Grapes is pointed out at p. 495, but "J. C. B." rather exposes his own want of attention, and does not quite clearly point out how to avoid cracking. The only two varieties known to me as liable to crack are Madresfield Court and Royal Vineyard. Allowing Vines to become over-dry at the roots before the Grapes have swelled to their full size is a mistake no good gardener would make. "J. C. B." did this, and did the very worst thing he could do—gave the Vines "a good soaking." No wonder the toughened skins burst. Vines should be well watered all through the growing period, and the last watering should be thorough and given as the Grapes begin to colour. By this treatment no check can be possible; the roots never have been anything like dry, and the thorough watering when colouring begins will carry them well through the ripening stage. All that is required to prevent cracking is to keep a dry atmosphere with ample ventilation in the house. The White Frontignan is not very liable to crack (Chasselas Musqué is probably the variety meant); it is a delicious Grape, but scarcely worth the trouble required to keep it from cracking.—J. DOUGLAS.

#### THE PREMATURE RIPENING OF PEARS, FLAVOUR, &c.

This subject has been commented on in the gardening press, and also been a matter of conversation among fruit growers for some time past. Premature or early ripening is likely to continue until the end of the Pear season, for now (a week before Christmas) I have Beurré Rance ripening. This variety on the average does not mature fully until the end of January. In my case this late Pear always ripens well from free-grown pyramids 12 feet to 15 feet in height; the fruits, it is true, are usually somewhat below the average in size, but this is an advantage rather than otherwise for their perfect maturation. This season the fruits of both Beurré Rance and Josephine de Malines are smaller than last year with me. One might reasonably have assumed it to have been quite the reverse, judging from the character of the two summers. Last year these Pears ripened at their usual time; this year, as before stated, they are much earlier. I am disposed to attribute this earlier ripening not so much to this past season as to the previous one, when, as we know quite well, both the drought and the unusual continuance of hot weather tended, if anything, to over-ripen the wood of fruit trees. This I believe to be the cause of the fruit this past season ripening prematurely. I cannot in any way attribute it to the additional rainfall or the cooler weather during its growth. I think it is rather to be sought for, as I have indicated, in the previous conditions which tended to produce this season a fruitful rather than a woody growth. The influences at work to cause such a thorough ripening of the wood act also upon the roots, causing these latter to be of a more fibrous character. Next year I shall expect to see Pears making a stronger growth, by reason of the recent rainfall. I noted particularly that both of the aforementioned Pears this season were ready to gather nearly as much in advance of the usual time as they are now in ripening. In the case of Beurré Rance this was particularly noteworthy, the crop of which was excellent, all seeming to mature for gathering simultaneously—so much so, in fact, that they had to be handled with great care to prevent them falling. Josephine de Malines hung ten days or a fortnight later than the foregoing. Anent the

former of these Pears, I note that a well-known pomologist in his catalogue advises a wall (south or west). With not the best possible locality I have always had the most satisfactory results from trees in the open—so much so, that my wall trees of Beurré Rance are no more, having given place to dessert Plums. The finer fruits, I readily admit, would be obtained from wall trees, but what is the use of these finer fruits if they will not after gathering ripen perfectly for the dessert? They can of course be used for stewing—that is one way out of the difficulty—but for kitchen use give me either Catillac or Uvedale's St. Germain over all others. The increased attention given to growing what may be termed exhibition fruits has not caused any advance in flavour (perhaps of the two, otherwise, through coarseness); it has rather tended towards size, which I readily admit is only attainable by skilful culture and attention; but after all, extra large fruits, such as usually win the premier prizes, are not such as find the most acceptance upon the dinner table. I do not for one moment justify what may be deemed small or inferior examples; to strike the medium is not a difficult matter.

Whilst on this subject I am led to think of one Pear in particular, viz., Marie Louise, of which I have repeatedly noticed that the best in point of flavour are the russety brown ones from pyramids or other trees in the open as compared with the finer, but more tender skinned examples from walls. Is not this difference to be attributed to the gain in the former instance by the much more free circulation of air going on around the fruits? I think it is only reasonable to assume this to be the case. I have noticed this same tendency in point of flavour in Williams' Bon Chrétien and in a Pear that is too much condemned in regard to flavour Beurré Clairgeau, medium-sized fruits of which are much the best. On the whole I am disposed to think that the Pear is not looked upon as being so hardy as it actually is. I am well aware that the climate of the Channel Islands is most favourable to the production of fine fruits both from the point of quality and size, but, situated as these said islands are, I am very doubtful if these characteristics can be attributed to the additional warmth so much as to the genial breezes which blow over them. Pear trees this season bid well for blossom next year, more so in fact than I should have thought, taking into consideration the late growth that many trees made.

SOUTHON.

### TREES AND SHRUBS.

#### THE BAMBOO GARDEN.

**PHYLLOSTACHYS BAMBUSOIDES.**—The innumerable claimants to this title have been finally sent out of court as impostors now that the real Simon Pure has been received from Hong Kong; and now that it has arrived it appears to have all the characteristics of an Arundinaria, but Phyllostachys it has been named by Munro, and Phyllostachys, I suppose, it must remain. The stem, which is said to grow to a height of from 10 feet to 12 feet, is round and much branched, purplish in colour, and slightly zigzagged; the nodes are thick and smooth, the branches are much knotted, short, and semi-verticillate. The leaves are bright green above, 5 inches long by 1 inch wide, but very variable in size; they are sharply serrated on both edges. The leaf-sheaths are furnished at the top with conspicuous bristles, which fall off with age. The plant has every appearance of proving a valuable addition to our collection of hardy Bamboos, but the specimens which I have seen are as yet mere babies.

**PHYLLOSTACHYS AUREA.**—The distinctive name aurea is not very happily chosen, for there is nothing golden about the plant unless it be the yellow stems, and these are not peculiar to the variety named. *P. aurea* is not a great favourite of mine, as it lacks the grace which is the chief ornament of the family. The stems are very straight and erect in this country, growing close round the base of the plant, which gives it the appearance of having caespitose roots; whereas it has a true rhizome, which in its native climate runs freely. It is seen at its best when planted in bold masses, as the individual plant by itself has too much of the shape of the birchen rod of an old-fashioned dame's school in the kingdom of Brobdingnag. A distinguishing feature of this species is the shortness of the internodes at the base of the stem. The leaves vary much in size, some being about 4 inches long by half an inch wide, others from 6 inches to 7 inches long by an inch or even more broad. The petiole is well defined, the insertion of the young leaves very hairy. One edge of the leaf is conspicuously serrated, the other very slightly, the teeth on this edge being placed irregularly and at great distances apart. Both surfaces are glabrous. At Shrubland, in Lord de Saumarez's garden, *Phyllostachys aurea* is 14 feet 6 inches high, the canes being 2½ inches round. Last year, 1893, a Bamboo was received here and at Kew from Japan under the name of *Bambusa sterilis*, which the Japanese Gardeners' Association describe as closely allied to *Phyllostachys heterocycla*. This appeared to me to be undistinguishable from *Bambusa aurea*, and Messrs. Watson and Bean now share my opinion. Curiously enough, the plants were covered with an undeveloped inflorescence, which proved to be infested with a hitherto undescribed ergot. I may here note once more the great confusion which has prevailed in the descriptions of several of the *Phyllostachys* tribe. *Aurea*, *mitis*, *Quiloi*, *Henonis*, *viridiglaucescens*, *flexuosa* have all been jumbled up in the most hopeless tangle. This has been due partly to the fact of plants being sent out by dealers under any and every name, partly to the eagerness of collectors to describe plants before time had enabled them to develop their characteristics. In a young state *P. aurea* is hardly to be distinguished from *P. mitis*, but as they grow older each puts forth its distinctive features and asserts its identity. Messrs. Rivière remark that, like as the two plants are in their early stages, *mitis* never degenerates into *aurea*, nor does *aurea* ever rise to the dignity of *mitis*.

**PHYLLOSTACHYS MITIS.**—This is the tallest and, in that respect, the noblest of all the Bamboos capable of being cultivated in this country. At Shrubland the culms of plants imported seven years ago are 19 feet 5 inches high and 4½ inches in circumference. In China and Japan it grows to 60 feet high. The stems, which spring straight out of the ground like spears, are, when fully developed, beautifully arched, and have for that reason a grace which is not to be found in *P. aurea*. The young shoots when they first appear above ground seem to hang fire for a while before taking their upward growth. When once they start they are very rapid, growing in this country as much as 6 inches in the twenty-four hours. The utmost growth that I have noticed is 4½ inches in the twenty-four hours; but mine are young plants. Messrs. Rivière have made most interesting experiments on the growth of Bamboos, of which they give tables. The maximum growth of an adult plant of *Phyllostachys mitis* during twenty-four hours in Algiers was 20 inches. They note that *P. mitis* grows most during the night, whereas the other plants of similar growth such as *viridiglaucescens*, *aurea*, *nigra*, &c., make their chief growth during the day. *Bambusa Tulda*, in Bengal, is said to grow as much as three centimètres (upward of 1½ inches) in an hour. As in *P. aurea*, the leaves, which vary much in size, are serrated on one edge, the teeth being almost if not quite absent on the other. The petiole is shorter than in *aurea*, and the hairy growth at its insertion less conspicuous. The sheaths differ much in



colour, but are generally brownish and spotted with purple. As the branches are developed the withered sheaths drop off, leaving a shining deep green stem which gradually ripens into a bright yellow. The branching begins at the base, and as soon as it is thoroughly active the growth of the culm ceases. The underground procession of the rhizome is much more marked than in *P. aurea*, the stems appearing alternately along its course. Although its running powers are in this climate not great, still, whereas in *P. aurea* there is a caespitose appearance, in *P. mitis* the rhizomatous character is well maintained. The young shoots of this Bamboo are eaten in China and Japan. Some gastronomers profess to detect in them the taste of *Asparagus*; this, I confess, demands some faith. The consistency is crisp and pleasant, like *Celery*, but the flavour depends upon the sauce—at least that is my experience. As pickles and sweetmeats they are but poor eating. To its culinary merits, such as they are, the plant owes the synonym *edulis*, which is at any rate less foolish than *mitis*.

**PHYLLOSTACHYS SULPHEURA.**—A handsome golden-stemmed Bamboo, which in appearance has great affinity with *P. mitis*, though Messrs. Rivière see a connection between it and *P. flexuosa*. It is far stiffer and not so free a runner as *flexuosa*, while the only difference which I can detect between it and *mitis* is that it is not so tall and has a more brilliantly coloured stem. The other characteristics are the same; indeed, it would puzzle an expert to tell them apart. Messrs. Watson and Bean lean to this opinion. It is perfectly hardy and well worth cultivating, but difficult to obtain. At Shrubland it is growing to a height of 13 feet, with a circumference of  $2\frac{3}{4}$  inches round the stem.

**PHYLLOSTACHYS QUILIOI.**—A very distinct Bamboo, introduced from the north of Japan by the French Admiral du Quilio in 1866. Some writers see a great likeness between this and *P. mitis*, *P. aurea* and *P. viridi-glaucescens*. To me it appears to have a character altogether its own. In the first place it has a far looser habit, the branches are longer in proportion to the culm, the leaves are larger, serrated on both edges and often marked with purple spots on a deeper green ground than is found in the foliage of either of the others; the hairs at the insertion of the leaves are deep purple. The sheaths are most peculiar; they are of a pinkish-brown colour, deeply mottled with purple spots, and, as they fall, reveal a brilliantly polished dark green stem. The culms are more upright than those of *P. viridi-glaucescens*, less compact and more arching than those of *P. mitis* and *P. aurea*; the rootstock is far more active than in either of the two latter species (in this country), while it does not seem to run so much as that of *P. viridi-glaucescens*. I may be in a minority, but I see in *P. Quilioi* a Bamboo to be recognised among a thousand; and the many eminent botanists and gardeners to whom I have shown it have without exception come round to my opinion. I cannot help suspecting that those who have described it hitherto have not had the true plant before them. I know that this is the case in one instance, where *P. Quilioi* was actually described from a plant of *P. mitis*. Altogether a notable Bamboo, growing at Shrubland to a height of 18 feet 6 inches, the canes having a circumference of  $3\frac{3}{4}$  inches. Synonym, *Phyllostachys Mazeli*.

**PHYLLOSTACHYS VIRIDI-GLAUCESCENS.**—A most elegant and graceful Bamboo, to which many cultivators give the palm of loveliness. It grows to a great height—nearly 18 feet at Shrubland, 14 feet at Kew—while the slender, tapering culms are not more than 2 inches round. The rootstock is very active, the plant being a great runner, while many of the culms come almost horizontally out of the ground, giving the plant a very wide spread. The leaves are generally about 3 inches or 4 inches long and about three-quarters of an inch across; one edge is serrated, the other only partially so towards the point of the leaf. The petiole is well defined, and short brown hairs encircle the insertion of the leaf. The leaves are of a bright green, in pretty contrast with violet stems, which turn to a yellowish-green. The stem

is much zigzagged. Once established, this is a perfectly hardy Bamboo, but it is not safe to plant out specimens which have travelled: I have lost a large percentage in this way. It is better to pot newly arrived plants and let them remain in a cool house until they have recovered from the effects of their journey.

**PHYLLOSTACHYS FLEXUOSA.**—Messrs. Watson and Bean make this identical with *P. viridi-glaucescens*. On the other hand, Messrs. Rivière, who recognise the similarity, say, "We have not remarked in the spathiform sheaths of this Bamboo the toothed membranous expansions which we have met with in many other species of the same group, notably in *P. viridi-glaucescens*." There is, moreover, the fact that *P. flexuosa* flowered and fruited all over France and in Algiers in 1876, while *P. viridi-glaucescens* did not, and this would seem to indicate a different plant. It is certainly not easy to detect any outward and visible sign of difference between the two. *P. flexuosa*, which must not be confounded with the prickly species described under that name by Munro, was introduced into France from the north of China in 1864.

**PHYLLOSTACHYS VIOLASCENS.**—This is now reckoned to be a variety of *P. viridi-glaucescens*. It is somewhat more tender, the leaves being apt to be cut by frost, which gives the plant an ugly appearance in winter, but with the spring the culms are clothed with new foliage, and after all it is only those shoots which come into existence in the late autumn which suffer. The foliage is rather darker and larger than the type and the plant more straggling, the rhizomes running rampantly. But the most distinctive feature is the deep purple colour of the young stems during their first year. This is lost in the two-year-old stems, which change to a greenish yellow or brown. The plants at Shrubland are 15 feet high and the culms  $2\frac{3}{4}$  inches in circumference. A beautiful plant in its early growth, but on account of the defects mentioned above hardly to be reckoned one of the best of the hardy Bamboos.

**PHYLLOSTACHYS HENONIS.**—To my taste this is the loveliest of all our Bamboos; indeed, it would need the inspiration of a poet to do justice to its beauty. Nor is that its only merit, for it is perfectly hardy and bears up bravely against our rudest and coldest weather. Of all the plants that I imported not one has gone amiss, though they were subjected to hardships to which, now that I know better how to manage, I should not dream of exposing them, and which proved fatal to a good many of their travelling companions. The Shrubland plants are now 14 feet high, the stems  $1\frac{3}{4}$  inches in circumference. The tapering leaves are about 4 inches long and about half an inch across. They are very smooth on the upper surface and ribbed on the lower, serrated on one edge and very slightly on the other. The colour is a pale green and less glaucous on the lower surface than most of the leaves of *Phyllostachys*, the midrib prominent, the petiole well defined. The slender tall stems are green at first, growing yellow with age, slightly zigzagged. The rootstock runs rather freely. But it is to its habit that this Bamboo owes its surpassing loveliness. The two-year-old culms, borne down by the weight of their own foliage, bend almost to the earth in graceful curves, forming a groundwork of the most elegant beauty, from which the stems of the year spring up, arching and waving their feathery fronds, the delicate green leaves seeming to float in the air. I regard *P. Henonis* as the embodiment of every grace to which plant life is heir. The Japanese synonym is *Ila-chiku*, the Chinese characters with which it is written signifying the "light or volatile Bamboo."

**PHYLLOSTACHYS NIGRA.**—This is perhaps the best known, and from its black stems the most easily recognised of the hardy Bamboos. On the Riviera and in Algiers it grows to a height of about 30 feet, the stems being nearly 6 inches round. At Shrubland and at Kew it is 10 feet high and the stems are 2 inches round. With me the plant has been a little capricious and difficult to establish, but once it has taken hold of the

ground no Bamboo seems hardier. The stems are of an olive-green colour during their first year of growth, changing to shining black the following year. They are slightly zigzagged. The leaves, which are from 3 inches to  $4\frac{1}{2}$  inches long by three-quarters of an inch broad, are green on the upper surface and glaucous underneath. The rhizome runs with some freedom. Messrs. Rivière call attention to some peculiarities in the structure of this Bamboo upon which, as they are more interesting to the botanist than to the gardener, it is unnecessary to dwell here. It is enough to say that in *Phyllostachys nigra* we have a plant of striking beauty and undoubted hardiness. It is said that it is the rhizome of *P. nigra* which furnishes the Wanghai cane of emmerée, to which allusion has already been made.

**PHYLLOSTACHYS NIGRO-PUNCTATA.**—A variety of *Phyllostachys nigra*, taller, and a looser and more free grower than the type. The stems, green at first, change in their second year to a dull brown speckled with black. There is no other characteristic to differentiate it from *P. nigra*.

**PHYLLOSTACHYS BORVANA.**—Another and still larger variety of *Phyllostachys nigra*, one of the handsomest and most vigorous of the hardy Bamboos, very graceful in its habit, as indeed are both *P. nigra* and *P. nigro-punctata*. As in their case, the stems are green during their first year, but change colour the second year to a dull brown splashed with large deep purple or black blotches. This and the preceding variety have proved more easy to establish than the type. I have not lost a single plant of either, though they have been subjected to great hardships; whereas *P. nigra*, as I have already said, has been apt to resent rough treatment. One peculiarity of all three varieties is noteworthy. The rhizomes are fond of running very near the surface of the earth, sometimes, indeed, above the surface. When this is detected it is advisable to cover them with a little loose soil, which may be kept down with a light stone. This encourages the verticillate roots to strike downwards. Failing this, I have known the rhizome to be killed back and the development of the plant to that extent retarded.

**PHYLLOSTACHYS CASTILLONIS.**—A most lovely plant, indeed one of the best of the many good gifts which we owe to Japanese gardens. The foliage is larger than it is in most of the Bamboos, some of the leaves being as much as between 8 inches and 9 inches long by nearly 2 inches broad. When they first appear they are striped with bright orange-yellow, which in time fades to a creamy white. Both edges are serrated. The petiole is short, the leaf-sheath dressed with a fringe of long brownish purple hairs. The stem, which is much zigzagged, is bright yellow and green, the latter colour remaining in the deep channels left by the pressure of the branches, so that the two colours are alternate all the way up the culm, the hues being intensified with age. As the sheaths of the branchlets are of a very pretty pink, the plant has a tri-coloured effect, which is most pleasing; the branches come in twos and threes. My plants in their second year have grown to about 6 feet, and have every appearance of attaining a goodly height and proportionate circumference. Twenty-four degrees of frost last January (1894) did them no harm, but M. Marliac tells me that the foliage is apt to suffer from snow. This, however, can at the worst be only a temporary evil. One of my plants is extremely curious as a variation from the type. Not only is the variegation absent from the leaves, which are bright green, but in the stems its position is exactly reversed, the channels being yellow and the rest of the culms green. The Japanese name is *Kimmei-chiku*, "the golden brilliant Bamboo."

**PHYLLOSTACHYS KUMASASA** (*P. viminalis*, Marliac).—A pretty little Bamboo, described by Munro as *P. kumasasa*, though the Japanese name is *lungozasa*. The stems are about 18 inches high, purplish green in colour, with brown sheaths, much zigzagged and very slender, distinctly channelled from the pressure of the branches, which spring in twos and threes, sometimes in fours from the nodes. The leaves are

from 2 inches to 4 inches in length, and an inch, more or less, in width; ovate; soft hairs very conspicuous on the lower surface, but none on the upper surface or on the insertion of the leaves, which are serrated on both edges. By giving the name *kumasaea* to this Bamboo, Munro has given rise to some difficulty. *Sasa* (in composition after a vowel *sasa*) is a Japanese version of the two Chinese words *hsiao chu* (small Bamboo), and is the generic name given by the Japanese to the dwarf Bamboos; *chiku*, another Japanese version of the Chinese word *chu* (Bamboo), and *také*, a pure Japanese word, being the names given to the tall-growing or arborescent Bamboos. *Kuma* signifies an edge or border. The etymology of the word *kumazasa* (barbarously altered by Munro into *kumasaea*) would seem to point to the *Arundinaria Veitchi*, on account of its leaves withering at the edge in winter, and so having an edge or border margin. It is certainly often used in that sense by natives. Japanese botanists, however, apply the name to *Arundinaria tessellata* or *Ragamowski*, while our English botanists, following Munro, give it to *Phyllostachys viminalis*, which the Japanese call *bungozasa*, probably from the province of that name in the southern island. There is thus a triangular duel between science, etymology and common use, which is most bewildering, and so long as this lasts it would seem wiser to leave the Japanese names alone, contenting ourselves with the European nomenclature. But when science does find it necessary to adopt words taken from a foreign tongue with which she is unacquainted, she will do well to avoid altering consonants, as Munro did when he made *sasa* out of *sasa*, or she may get herself into dire trouble. Try it upon a few English monosyllables! Synonym, *Phyllostachys viminalis*.

A. B. FREEMAN-MITFORD.

**Hypericum nepalense** (p. 476).—Surely Mr. Wolley-Dod is wrong in asserting that the plant (shrub) long known in gardens under this name and that grown as *H. patulum* are the same. These plants grow here probably as well as they do anywhere. I have seen *H. nepalense* 10 feet to 12 feet high, while I have never seen *H. patulum* even in the case of long-established bushes more than 3 feet to 4 feet high. In both leaf and flower characters they differ widely, one of the most striking characters of *nepalense* being the brilliant scarlet colour which many of the leaves (not altogether, but one here and there) take on in the autumn, a feature never seen in *patulum*, though it occasionally occurs in the case of *H. oblongifolium*. The late M. Lavalée calls our *patulum* *H. Gumbletoni* (Hort. Segrez), and gives the synonymy as *H. patulum*, Hort. (non Thunb.), *Rev. Hort.*, 1875, *H. nepalense*, Hort. (non Choisy); then he makes *H. uralum* a distinct species, and gives *H. uralense* (Hort.) as its syn.—T. SMITH, *Newry*.

## FLOWER GARDEN.

### GLADIOLI.

WHEN commenting in THE GARDEN some little time ago on the fine development of our exhibit of these flowers at the R.H.S. Gardens, Chiswick, you ask if we give the plants any special culture, or if the delicate coloured varieties are more difficult to grow than the darker self-coloured kinds. As regards the various colours there is little difference, and much depends on the constitution of individual varieties as to whether they increase rapidly or not. Some very fine varieties scarcely produce spawn; consequently are more difficult to grow than others which do so more or less abundantly. Yellow shades of colour are, as a rule, the most prolific. As regards culture, suitable soil, in my opinion, is the most important thing. Nearly all writers on Gladioli lay great stress

on the soil being light and sandy for the *gandavensis* hybrids. Here we grow them in a soil exactly the reverse of this—strong, adhesive yellow loam, which sticks together like putty, and in which not a particle of sand is visible, neither is any mixed with the soil or placed round the bulbs in planting, so common with most cultivators. In place of sand we use a little burnt earth over each bulb, just enough to ensure the new bulb lifting clean in the autumn. Sand is entirely dispensed with here from raising the seed and small bulblets onwards, both of which have a fairly good holding loam from the commencement. A light sandy humus soil I should consider the worst for encouraging disease and failure. Sometimes it is suggested that the ground intended to be planted with Gladioli might with advantage be fallowed the previous summer, and this was the plan adopted by the late M. Souchet, the originator of the fine race of *gandavensis* hybrids, still the most noble and beautiful of the genus. Whilst admitting the advantage most crops derive from this system of cultivation, I fancy few people would care to have bare patches of fallow in their gardens, and even on our own strong loam we have not found it necessary to adopt this plan. Probably M. Souchet adopted the system more with the idea of destroying the cockchafer grub, or *ver blanc*, as it is called in France, so destructive in some parts of his grounds, and to the young stock of Gladioli generally, as we can testify during hot seasons here. The benefit accruing to the soil was probably of quite secondary importance. I believe a similar plan of fallowing the ground is sometimes adopted on some of the Dutch bulb farms, boxes being placed to encourage the nesting of starlings, which greedily devour the cockchafers whenever the ground is freshly broken up and the grubs exposed to view.

### CULTIVATION.

We mostly plant our Gladioli on ground where Roses have been sold off the previous autumn, and during December or January this is thrown up roughly, and advantage taken to turn it over once or twice later to become well pulverised before the planting season arrives. At the final digging we turn in deeply a small quantity of well decayed manure, but are particular that this does not come into contact with the bulb. Planting generally commences towards the end of March or early in April, and continues at intervals over about a month. As soon as growth is well above ground hoeing is commenced, and continued at intervals until the blooming season arrives. Little or no watering is done, but sometimes a few beds are mulched very lightly with short straw. We carefully avoid mulching with rank or decayed manure or applying liquid manure, both of which we consider fruitful sources of disease. Other bad practices are carefully avoided, such as leaving the stems on after lifting the bulbs and laying them away to dry off in this state. Keeping the bulbs in sand or dry earth, or putting numbers together in paper bags until they start into premature growth, which they quickly do, and soon become masses of roots in the bags, arising from the moisture of many bulbs coming into close contact with each other, are common and fruitful sources of failure in Gladioli culture, as is also the practice of adding to the beds turfy loam, which invariably contains wireworm, a most destructive pest to Gladioli. Much has been written about the

### HARDINESS

of Gladioli and the advisability of leaving them in the ground during winter. Here we find the

*gandavensis* and *Lemoinei* varieties are both comparatively hardy if the bulbs are in the ground to a depth of about 7 inches. After severe winters, without protection, we have numbers come up in the spring, which bloom strongly the same year, from bulbs missed in lifting the previous autumn, and which by accident have been dug deeper into the ground than the usual depth of planting. From this it may be inferred that both sections are hardy when planted sufficiently deep in well-drained soil. Especially would this be so near the coast, where frost is less severe than here. Although we leave a portion of our young stock in the ground during winter, I do not advocate the practice generally. Gladioli dislike excessive wet, which is possibly more harmful than frost, and many of the corms have a hollow crown-like basin, which makes it difficult for water to pass freely away. Another drawback is the decay of the old corm in close contact with the newly-formed one from which the following summer's bloom is expected. The old corm as it slowly rots becomes infested with worms and grubs, which in turn frequently attack the new corm, and by this means cause it to become unhealthy. Annual lifting has also the further advantage of allowing the bulbs to be divided and cleaned and of their being replanted in well cultivated soil, matters of much importance in their successful cultivation. Gladioli with us are much the finest in a hot and comparatively dry season. During the early part of the hot summer of 1893 the flowers and spikes were of a size and beauty never previously attained.

We find Gladioli fairly easy to manage, and are able to keep up a healthy stock of most of the old-established varieties, and to increase vigorous stock of any good seedlings forming bulblets, but through lack of this propensity many fine seedlings are slow and difficult to increase. The mole is our greatest enemy, and the depredations of this subtle animal cause more losses than all other evils put together.

If Gladioli do not succeed under certain modes of cultivation and fail in some gardens, might not the same charge be brought against many other garden plants. Take the Carnation as one example. In how many gardens are healthy collections of named varieties of even the more robust border kinds kept up without frequent renewals of fresh stock? I fancy in only a few favoured spots, although the orthodox rules of culture may have been strictly carried out. A large trade grower of these plants recently remarked that he annually provides about 100,000 to meet losses. By varying modes of cultivation, exchange of stock, &c., the specialist overcomes difficulties, and is enabled to provide healthy stock. So with Gladioli. It is, as your correspondent "Enthusiast" states when he quotes the old adage, "That where there's a will there's a way." If it were otherwise, the large trade growers of these flowers would not be able to offer, as they do, by the hundred every season bulbs of sorts which have been in existence for considerably over a quarter of a century. Perhaps the old French variety *Meyerbeer* was never previously exhibited of so fine a size and substance as by us during the past season from stock raised here, yet it is a variety dating back at least a quarter of a century. *Horace Vernet*, a now somewhat old variety, was another notable example of healthy vigour and beauty in old age. There are many other old favourites so easily increased where the cultivation of these flowers is well understood, that they may be purchased anywhere for a few pence each.

Cambridge.

J. BURRELL.

## SUB-TROPICAL PLANTS AT TORQUAY.

The plant that is above all others valuable for sub-tropical gardening is, without doubt, *Musa Ensete*, the graceful sweep and emerald folds of its giant leaves associating themselves naturally with tropic skies and Grass hammocks, and suggesting recollections of the frondage of fruiting Bananas waving listlessly beneath the faint trade wind. Though it is not often that in this much-maligned island we are treated to the weather of the tropics, there are spots in England where during most summers *Musas* may be seen flourishing in the open, the popular seaside town which furnishes the scene of the accompanying illustration being one of them. Many years ago it occurred to certain residents in Torquay that their equable climate—the influences of the tail-end of the Gulf

*Musas*, *Daturas* (*Brugmansias*) and *Hedychiums* luxuriate in the warm autumn weather and have been known to pass through the winter alive. Such a course in the case of these subjects should not, however, be attempted except by way of experiment, as even if they survive they are so late in starting into growth, that they rarely have time to become ornamental before the advent of the next cold weather.

*Musas* should be kept in heat during the winter in order to induce strong growth, shifting them into a cool house in May and planting out in rich soil during the month of June. Care should be taken to disturb the ball of earth as little as possible in planting, as it is important that no check should be received at this juncture. In one garden, where a

whipped into ragged fringes by the boisterous winds of the Mediterranean, as may be seen any spring day at Algiers. S. W. F.

## NOTES ON HARDY PLANTS.

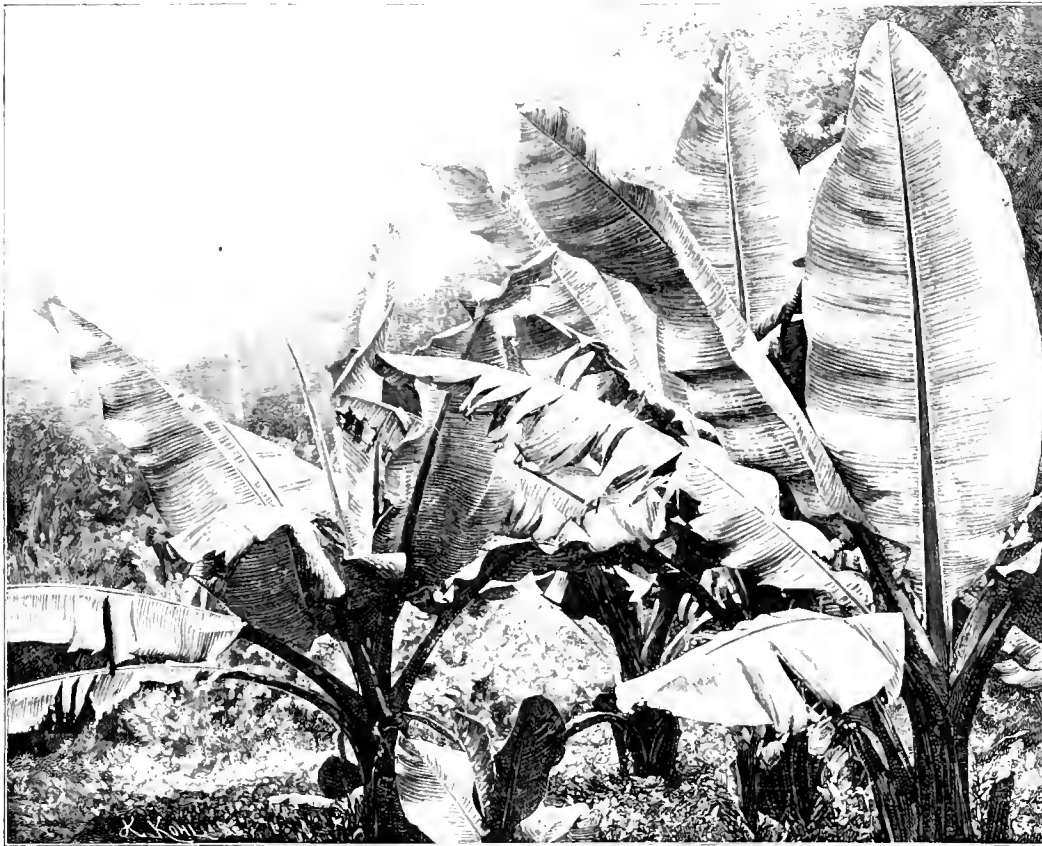
*Gillenia* (*Spiræa*) *trifoliata*.—Of all the *Spiræas*, whether woody or herbaceous, this is perhaps the most difficult to propagate. It makes long, direct, but somewhat crumpled roots that are considerably swollen at their deeper parts, and they are not very fibrous. At any time if the plants lose these roots they suffer a considerable check. There are two ways of propagation that I practise with success. One in the case of young plants that I should not care to lift, the other by means of old plants by root division. In the case of young plants, the young growths may be taken in early summer, and slipped off the wood-stock by a backward wrench. These treated in the ordinary way as summer cuttings make nice little plants for the autumn, but they will be a year or two before they produce flowers in the profuse way for which this species is so justly admired. The division of old strong roots is a more trying business, because the crown is so woody and hard, that you may easily lose the finer crowns by not securing to them their complement of roots. A knife is scarcely strong enough for this operation, so hard is the woody crown. I have to use the hatchet, driven by a heavy hammer. If you succeed in dividing these fairly, the plants may be relied upon to flower as well the first year as cuttings might do in their third, and yet to see this plant in all its beauty it should be left alone for many years without disturbance.

*Gillenia* (*Spiræa*) *stipulacea*.—This, seen growing, somewhat closely resembles *trifoliata*, but there are important differences. The feature implied by the specific name is an almost unnoticeable betanical one. The gardener will sooner notice that it has softer and more procumbent stems and perhaps a less profuse flowering habit. It is in reference to the better facilities for propagation compared with *trifoliata*, of which I have just been speaking, that this plant will show its wider variation. It makes more distinct offsets, so that in the case of plants a few years old you may take the offset roots with a fair amount of fibre, and they make good plants the first year. The *Gillenias* have a distinct and delicate beauty all their own, and are pre-eminently suited for growing in semi-boggy places interspersed with such subjects as the Bog

Lilies, Irises, Bamboos, and other similar strong growers.

**Snowdrops.**—I wonder what these are going to do? By the kindness of Mr. Allen and several other garden friends at home and abroad I am put in possession of a considerable collection, and nearly all thus early are spearing through and showing the fat buds, already becoming distinctly white. We suppose that the winter has yet to begin. No doubt, as usual, when the frosts come they will heave up the soil for nearly an inch, and, it is hoped, will so cover up again these humble, but welcome harbingers of the brighter season.

**Anthericum liliastrum.**—It is true that the St. Bruno Lily never looks better than when grown in bold groups. I have had it in single specimens with seventy or 100 spikes, but with me it invariably reaches a certain point of perfection, and the following year may by comparison be said to be a failure. In such cases I have always found the symptoms the same.



*Musa Ensete* in the garden at Ponsonby, Torquay. Engraved for THE GARDEN from a photograph sent by Mr. Holder.

stream—and the spacious gardens in which for the most part their villas were ensconced, were alike favourable to the growth of sub-tropical vegetation. The experiment was tried, succeeded, and has since become a cult. Now, with their Palms, *Dracenas*, and *Phormiums* many gardens present a Riviera-like aspect, and there are few without some specimen that attests the geniality of the west country atmosphere. *Dracena* (*Cordylina*) *indivisa* and *australis* grow to a large size and flower well. *Chamaerops Fortunei* and *excelsa* attain goodly proportions. The New Zealand Flaxes, both the type and the variegated variety, are thoroughly at home, and throw up candelabrum-like flower-spikes year after year. *Aralia* (*Fatsia*) *japonica* becomes almost a tree in a surprisingly short space of time, while during most summers an *Agave americana* can be found in bloom in the neighbourhood.

great point was made of sub-tropical bedding, a bed of large *Musas* was always the *piece de résistance*. In this instance the plants were grown during the winter in paraffin casks sawn in half, and when put out were wheeled to the sides of the holes prepared for them, the hoops knocked off the tubs, which were then pulled to pieces and the balls gently lowered into their places. The plants were quite 6 feet high when planted out, and never felt the move. The great enemy to the *Musa* is the wind. It is therefore advisable to plant in as sheltered a spot as is available, for should the leaves be much torn, its chief charm is lost.

There are few more beautiful sights than a Banana garden in a quiet valley in some West Indian isle, with every leaf intact and each a harmony of colour, with its soft gradations of green in the mingled sunshine and shade—few more pitiable than a plantation with leaves

Whether a cause or an effect of the lost vigour of the plants is not quite so clear to my mind, but I always find the most densely matted roots more or less cankered, with a strong and disagreeable smell. I take it that the oldest and decaying roots, from their contact, may have contaminated the whole. The stock, however, is by no means lost if dealt with promptly. The mass of roots only needs to be washed out, and all the crowns divided into single ones. These may be reset any time now when the frost is not in the ground, and they respond with remarkable vigour the first year, and, what is more, if these single crowns are placed somewhat closely, the idea of a bold group can be maintained. I have noticed lately that though there are larger forms—majus and giganteum—this, the dwarf type, fully holds its own, and by many is the most esteemed.

**Lithospermum rosmarinifolium.**—This in the open, owing to the continued mild weather, and notwithstanding the two short periods of frost, respectively here 12° and 8°, is now showing bloom, and I was pleased to read Mr. Buxton's notes in these columns a fortnight ago that he had a similar experience. It is an exquisite little shrub. As implied by the name, it resembles a little bush of Rosemary, and the spikes of blue flowers are of a colour only found in the Lithosperms and the Gentials. I think I can venture to recommend the planting of this species in sunny nooks of an otherwise well-exposed rockery, in deep seams of rich soil, where its roots may pierce deeply and never lack the needful moisture. I daresay that in some localities, or planted indiscriminately, it might be killed in very severe winters, but it is quite one of those species that is worthy of a little care, and when I say a little care, I mean no more, because I am quite sure I can keep it out-of-doors in my Yorkshire climate by fixing over it a few sprays of dry Braeken during the severer part of the winter. A more important point to watch is that you do not allow it to be overshadowed during summer, as then the shoots and evergreen foliage would be wanting in the ripeness essential for safety.

**Chrysobactron (Anthericum) Hookeri.**—There can be no better time than the present for dealing with overgrown plants of this. That the plants do become overgrown or—to be more precise—overcrowded is beyond doubt. The root habit is fleshy, twisted, and, with age, much congested. When plants that have been thriving reach the age of five or seven years, it is profitable in every sense of the word to divide them and give them fresh soil. According to my experience the plants attain their greatest vigour and beauty at the age of about four years. After that the foliage and flower-spikes, which may be equally numerous, or even increased, are lessened in vigour, and if you examine the roots of such plants you will readily find the cause. The fine shining coppery-green leaves surround the almost golden scapes, which reach a height of 2 feet, and nearly half that length beset with closely compacted flowers of the true old gold yellow. To anyone not acquainted with the plant it would almost suggest itself as too tender for out of doors, but I think we have no plant more hardy—at any rate, it never suffers from frost, not even the late frosts.

**The Elecampane (Inula Helenium).**—I suppose we may consider this one of our noblest British plants. It attains magnificent dimensions, and I know nothing so appropriate and effective for flanking or backing up groups of Lilies. Established stools in rich land throw up spikes 7 feet high, and the shuttlecock arrangement of the enormous radical leaves is telling to a degree. I have seen them 3 feet to 4 feet long and nearly 1 foot wide. It is needless to describe further to show the many uses that a stately plant like this may be put—in shrubberies as isolated specimens bordering lawns, sunny, but sheltered hillsides, or even the wild garden where there is but partial shade. In every way it is a reliable plant if you give it good deep soil and keep it clear of other plants. For small gardens I should say that it would be totally out of place.

**Meconopsis Wallichii.**—I would not cover this up during the winter in any way that had the least tendency to smother its hairy foliage. If you do so I fear you will find when the covering is removed that the handsome foliage has become more or less decayed; besides, there is no necessity for it. It is perfectly hardy, and during our wettest winters, notwithstanding its hairy covering, it manages to roll off the wet in globules if other material does not come into contact with it. A sheet of glass borne over its head by some contrivance would be different—better—helpful, as in that case there would be no contact. Of course, we must remember it is but a biennial, and that nothing will save plants after they have once flowered. But, beautiful as the pale blue flowers of this species are, I think the yellowish green rosettes of foliage, beset with their long silky hairs, are quite as effective in the first year of the plant's life as the dying glory of its flowers. It enjoys heavy, almost clay-like, loam and a wet situation, with as much sunshine as it can get. Just now and all through the winter it is one of those plants that may be looked upon with pleasure, and which helps to sustain our interest in our gardens until the advent of spring flowers.

**Tulipa sylvestris.**—I do not know why we should take up our Tulip bulbs every year, at any rate those of the species, and I am quite sure that we not only need not do so in the case of this one, but that it will be infinitely more profitable to leave it alone in every way except one, and that is, if you love it, give it room. It may not be generally known that this Tulip spreads itself deeply underground by means of root-stolons, and that is what I mean by saying give it room. I have just had occasion to disturb an old group of seven or eight years' standing, originally formed of but six bulbs, and I found the progeny in a patch some 8 feet or 9 feet across. I ought to say that the land was rich and light and the position as sunny as possible. Everybody ought to grow this Tulip, glistening pale yellow, with casual edgings of red. Very frequently the scapes carry two flowers, but the most valuable property of all is the piquant aromatic perfume. As a flower for picking it is perfect. The bulbs are very small for the size of plant and flower. J. Wood.

Woolville, Kirkstall.

#### FLOWER GARDEN NOTES.

In all operations connected with the annual raising of the stock of summer-bedding plants there is a growing tendency to rely more on those obtainable from seed, and that being so an early inspection of catalogues is imperative, many varieties having to be in by the end of the month to secure good plants. Advantages claimed for seedlings in lieu of cuttings are chiefly that attention for five months in the year is dispensed with, and also that the plan adapts itself to limited accommodation in the way of glass. A lot of August-struck cuttings require a proportionately large share of room; whilst, on the other hand, one small warm house will hold a lot of pans and boxes for seedlings, and by the time these are ready to prick off, pits that have been emptied of the earliest Potatoes, French Beans and Asparagus can be filled with them. A great variety of plants is now obtained in this way; in fact selections from all the different families used for the summer display would be included in the list, herbaceous plants, choice bedders, sub-tropical plants, specialties for particular work, and the best of the annuals. For those not conversant with the proper time for sowing it may be noted that herbaceous plants designed for the formal garden, as, for instance, Antirrhinums and Penstemons, should be sown about the end of February; choice bedding plants, Begonias and Centaureas, for example, early in the same month, most of the sub-tropical plants at the same time, and the commoner bedding plants and the best annuals, Lobelia, Verbena, Petunia, and Zinnias among others, some time in March. Plants for special purposes should be raised so that they can be grown along into nice stuff by the time they are required. Golden rules to be followed in the rais-

ing of all the above plants are to sow carefully and at the proper time, to keep in an even temperature, to prick off as soon as practicable, to grow on quickly, and where necessary to allow a suitable time for hardening off. Where seedlings are used somewhat extensively, it may also be noted that one should be able to thoroughly rely on the strain so as to have the right thing in the right place. A mistake does not matter so much in the wild garden, but is sometimes awkward in small beds in prominent places. Two cases in point that came under my notice last year are illustrations of this. One was a group of small beds planted with a strong growing Petunia, that would have been very fine in a bed some score feet or more square, but that was quite out of character in tiny circles that one could step across, and another case was that of a lot of Antirrhinums that should have gone up quite 2 feet, but that proved pigmy varieties and were flowering at 6 inches. The different types of Begonias furnish material for the same argument. The big-flowered, big-foliaged varieties are doubtless fine for massing in quantity, or as a set-off to a nicely contrasting carpet, but for small beds the semperflorens type is infinitely preferable. I suppose it is matter for congratulation that so many different forms are available. Our giant or California Petunias and strong seedling Verbenas are as useful in their way as the dwarf, compact types. The Centaurea candidissima is probably the best silvery-foliaged plant we have and a long way better than the sickly variegation furnished by some Geraniums, and its usefulness is the more apparent when we find that white-flowering bedders of that size are somewhat scarce. Of course, in dwarfier subjects we have the lovely White Swan Viola and the really excellent novelty White Lady Lobelia, and in taller plants the very useful white Antirrhinum, but the medium size in whites gives us rather shy-flowering subjects, as Pelargoniums, or of miffy habit, as white Verbenas. Taller white flowers, all exceedingly useful in the flower garden in different ways, are the Sweet Tobacco and white Marguerites, with Guiding Star (pompon) and Constance (decorative) Dahlias. These last three, however, would be included in plants raised from cuttings, and are therefore not admissible among seedlings. I have included sub-tropical plants in the list of those obtainable from seed. Only, however, in very large gardens are they required in quantity; the small and average sized places can be furnished from a sowing of Eucalyptus globulus and E. citriodora, Acacia lophantha, Grevillea robusta and a few plants of Nicotiana glauca—a very useful acquisition that comes readily and quickly from seed, is a kindly and quick grower, and an efficient and cheap substitute for large-leaved sub-tropical plants. With the above, if there is much covering of balconies, &c., to be done, may be sown a nice batch of Cobaea scandens, the best and quietest summer climber we have. The seed is best sown singly in small pots, placing it on edge.

**NOVELTIES.**—It is seldom advisable to accept these and plant them the first season in prominent places in the flower garden unless one has previously seen them doing well under similar conditions. Nor is it always advisable in the case of beds of mixed seedlings. Verbenas, Phlox, and Nemesis are generally satisfactory, but such things as Begonias and Petunias are apt to vary considerably and to present in their variety features not consistent with the best type of flower garden arrangements. Of things tried last summer for the first time that have certainly "come to stay" were the semperflorens type of Begonia, Dunrobin Bedder Fuchsia, a capital strain of blue Petunia, and the new Lobelia Bernard's Perpetual and White Lady. There were a few light blue stragglers in the latter variety, but we were careful in propagating and have got it true. A characteristic of this variety would seem to be its winter-flowering properties. The stock plants are now (December 28) quite studded with bloom, and have been gay for some time. One of the best introductions of 1894 was pro-

bably the new yellow *Viola Prince of Orange*. I should say it is likely to rank as about the very best yellow bedding plant of its size in cultivation. We shall take advantage of a wet day early in the year to overhaul the stock of pot plants that are required through the summer months in the immediate neighbourhood of the mansion. Big plants of *Heliotrope*, *Fuchsias*, *Aloysias*, and scented *Pelargoniums* will be thinned out, cut back where required, and some of the top soil removed preparatory to replacing with a bit of good loam and cow manure. A good batch of the variegated form of *Aspidistra lurida* that we find very useful for mixing in with flowering plants is similarly treated. Zonal *Pelargoniums* constitute the bulk of the smaller plants used (they stand the exposed situation much better than large-flowering *Begonias*, *Fuchsias*, and *Lilies*): these are also cut back and top-dressed with a bit of good stuff. They will stand in the same pots for years with this annual top-dressing and the help of manure water in summer only; the drainage must be reduced to a minimum, just one crock, and a small handful of cow manure over the same. A good many varieties are grown, but this is hardly necessary if one has a few good things in the different shades. *Raspail*, *Jacoby*, *Constance*, and *Queen of the Belgians* are four excellent sorts. A capital plant for dotting occasionally among the *Pelargoniums* is *Francoa ramosa*. This has come wonderfully to the fore of late years, and is nearly always to be found in outdoor groups. It should have cool treatment right away from the cutting pot; indeed anything in the way of warmth, especially moist warmth, is, as a rule, fatal to the proper development of the flower-spike. *Campanula pyramidalis* and *p. alba* are also, when well grown in pots, very effective in connection with the outdoor grouping of plants. Some plants of *Nicotiana affinis* in pots are always useful. This is a charming evening plant, and its delicate perfume is much appreciated; it is a worthy companion to the *Heliotropes* and *Aloysias* above mentioned. Sweet Peas in pans for covering a stretch of lattice-work formed a pleasing feature last summer in connection with the grouping of pot plants, and the pans will be cleared and refilled with some good soil ready for early sowing.

Claremont.

E. BURRELL.

GARDEN FLORA.

PLATE 995.

COREOPSIS GRANDIFLORA.

(WITH A COLOURED PLATE. \*)

FOUR years ago when I saw this plant flowering in the nursery of Mr. Thompson, of Ipswich, to whom we are indebted for its introduction, I ventured to predict that it would soon become popular and be extensively grown. It has already found numerous admirers, but doubtless as yet many will not have grown or seen it, and the publication of the accompanying plate, in which its fine size and rich colour are so well shown, will further help to popularise it. It fully deserves its name, as its flowers are very much larger than those of any other *Coreopsis* grown in gardens, whether annual or perennial. When first introduced it was said, on the authority of Dr. Gray, that its blooms were about the same size as those of *C. lanceolata*, but it was not long in cultivation before it produced flowers that altogether surpassed in size and beauty even the best forms of the older *C. lanceolata*. Again, Dr. Gray was undecided as to whether it should be considered an annual or perennial species, and even now it is not possible to make any definite declaration on the point. It is amenable to

treatment as an annual, but then only a late summer and autumn bloom is the result. Perhaps others who have grown it over several seasons will give us some information as to their experience, but it seems to me that the proper course is to treat it as a biennial, certainly so if we want a large bold group of it. If well grown it flowers so freely that it will in the end die. The first group that I grew bloomed from early summer till early winter, but not one plant survived. In two smaller groups of plants raised last year some plants at the present time have strong side shoots that will certainly grow again another year, whilst those that flowered very freely are very weak and in all probability will die. Some may think this discouraging, but the plant produces and ripens an abundance of seed even whilst flowering, and it is advisable if prolonged blooming is desired to keep the faded flower-heads picked off, except such as are wanted for seed. In raising it from seed, slight variations occur as regards the size of flowers, and it will be wise therefore to encourage and save seed from the finest.

Even if we eventually come to treat it entirely as an annual, this will not detract from its value, for it is a graceful flower and worthy of special care. Raising a batch of seedlings once a year is easily done. The seed may be sown at any time in spring and strong plants be ready to put out into their flowering quarters in autumn. The leaves of this species are quite distinct from those of *C. lanceolata*, being large, long, pinnate, and like those of the old *C. auriculata*. Its handsome flowers are borne on strong stems 12 inches to 18 inches in length, and the plate by no means exaggerates their size. In the garden the flowers are brilliant and long-lasting, and they are also valuable for cutting.

A. H.

THE WEEK'S WORK.

KITCHEN GARDEN.

SELECTING SEEDS.—The season is at hand for selecting the various kinds of seeds necessary for the coming season, and the earlier they are secured the better the quality, while there is less fear of any kind being sold out. It is none too early to commence sowing, so that there is no gain in leaving this work. Such things as early Radishes, Peas and Potatoes will need attention, and there is more leisure now than when the season is more advanced. In the selection of novelties much depends upon the means to grow them and the purpose for which they are required when grown. If cost is a consideration, one must grow old things that can be relied upon.

GREEN VEGETABLES.—Owing to the absence of frost there is no lack of green vegetables of every kind. Such things as Coleworts and Cabbage planted for autumn use have, so far, never received a check. With such mild weather it will be wise to save all forcing roots as much as possible, as in the early spring the green crops will run so quickly that there will then be a greater difficulty in providing a varied supply than at any other season. Cauliflowers and Broccoli, so far, have done well, and though later kinds will get damaged should severe frosts follow, so far these have been more plentiful than usual. The early varieties of winter Broccoli are much earlier than usual. I have February varieties showing at this date. These may be retarded by lifting, planting closely together and protecting in severe weather. The Kales should be reserved for later supplies, as these will stand sharp weather if hardly grown. A good breadth of late Seakale will be invaluable in May if reserved for that purpose. The crowns will only need covering with fine ashes, banking up soil later to blanch the

growths. If leaf mould or litter is plentiful it may be used as a top covering.

MUSHROOMS.—These should now be plentiful if previous calendar notes have been carried out. With a high outside temperature everything has favoured the growth of Mushrooms, as the required temperature will have been maintained without recourse to fire heat. I have always found the best flavoured Mushrooms are secured in cool or what may be termed low temperatures. A nice growing temperature of 55° is most suitable, and though there is no harm in 5° either way, the one given is a safe one, and in severe weather 5° less would be perfectly safe. Old beds will need assistance in the way of food and watering if dry. When necessary to soak the beds apply water in a tepid state, or, what is better, use liquid manure in a warm state. After watering, cover the surface of the beds with short, dry litter to maintain an even temperature. Beds that have become poor may be improved by placing mats over the surface, supported on strips of wood, laying a light covering of warm litter on the mats for a time till new growth is made. In underground houses in cold weather a small quantity of fresh stable manure placed in a heap in the house will do good.

SUCCESSIONAL BEDS will need more attention, as at this season there is more difficulty in getting the manure in a suitable state. To prevent overheating it is advisable to dry in small quantities, or in buildings where rain or frost cannot spoil the manure. I have often used the material in a rougher state than is usually advised should there be any scarcity of material, as it is not wise to allow the manure to get so dry that it does not heat thoroughly all through the whole mass when made up. Firm beds are essential to get good succulent growths, and a fair thickness of good maiden stiff loam thoroughly beaten tends to a fleshy growth. Those who have neither houses nor underground cellars may often get a good return by making beds in any old building. Such places must be free from drip, and in severe weather the beds need extra covering to prevent cold checking the growth. Good results are obtained from beds under dry stages. In large boxes I have often seen fine crops.

EARLY TOMATOES.—Now is a good time to sow a small quantity of Tomato seed. Tomatoes may now be grown by those with only limited means as regards space. I prefer to sow the early lot in very small pots, a few seeds in each, and when above ground to thin to the strongest. Sow in a warm house, and if a little bottom-heat is at command, so much the better. Sow an early kind, such as *Prelude*, *Conference* or *Conqueror*; failing bottom-heat, place on a warm sunny shelf and from the start grow near the light. By sowing seed thickly in pans or pots and pricking off afterwards much time is lost. The seedlings being very tender are some time in getting over the potting off. A suitable temperature for the plants when in the rough leaf is 60° to 65° by day with a free circulation of air as the plants strengthen, and 10° lower by night. When repotting use sound loam made firm, but avoid manure, which is best given in a liquid form when the plants are fruiting. Some advise manure to make a strong plant, but it tends to long-jointed wood and the fruits come only at the top of the plant instead of a few inches from the pot. Those who raise from cuttings for early fruit should now give a shift if the plants have been wintered in small pots. Here a different mode of culture is necessary, as the cuttings are never too strong and require some food to create new wood. A little bone-meal mixed with the soil is beneficial, and a close house for a short time after repotting.

FRUITING PLANTS.—Plants sown some months ago have grown so vigorously during the winter, that repotting was necessary earlier than usual. The earliest plants now in their fruiting pots, 8 inches or 10 inches as advised, are now in condition to be tied up to the rafters and got in position for fruiting. Given good treatment, these plants should fruit freely in March and give the supply till the plants sown at this date come in. I have

\* Drawn for THE GARDEN by H. G. Moon at Gravetye Manor. Lithographed and printed by Guillaume Severeys.

secured the best results by growing in low pits, the plants being trained to the roof, as they fruit sooner when they get all the light possible. By plunging the pots in good soil over the rims the plants get a new supply of food just as the fruits are formed and take less water than when grown with the roots more exposed.

**PLANTS IN FRAMES.**—Various plants are housed in cold frames, and they often suffer more at this season from damp than cold. Cauliflowers in pots or planted out should not be allowed to get attacked by mildew. Dry wood ashes is a valuable fertiliser and preventive of disease. Plants at all infested should get a dressing of fine sulphur and protection from heavy rains for a time. It is also a good plan to firm the soil if at all loose in the pots when going over the plants. Worms are harmful, and should be destroyed by watering with lime water or clear soot water. The plants at this date should be freely exposed in fine weather to prevent drawing. Lettuces in frames for spring use need similar attention to prevent decay. There should be no delay in covering with frames. Endive required for the next month's supply, as the blanched hearts are so soon injured by frost after a spell of mild weather. Peas sown in pots for planting out should be freely exposed in fine weather and only sparingly supplied with water.

G. WYTHES.

### FRUIT HOUSES.

**EARLY PERMANENT VINERY.**—With mild, almost frost-free weather, old Vines which have been forced for many years have broke exceptionally early this season, few blanks or irregularities being visible. With lengthening days and probable glimpses of warm sunshine, night figures which have up till now ranged from 50 to 52° may with advantage be raised to 55°, this being maintained even when the nights are frosty, as the tender leafage—being in somewhat close proximity to the roof glass—is easily injuriously affected should the mercury fall to any appreciable extent between midnight and daybreak. The chief use of the syringe being to induce the eyes to leave their sheath, no advantage, but rather the reverse, follows its frequent use after this stage is reached. A slight morning spray may occasionally be administered when sun heat raises the thermometer from 7 to 8, a chink of air being given in sheltered houses when 70° is reached, this being withdrawn at 1 p.m., sprinkled walls, floors and borders alone supplying the moisture for the night. As soon as growth is an inch long, liquid manure diluted to one-fourth its strength may be regularly poured into the evaporating pans, the same precaution being necessary in regard to hot steam arising from neglect in keeping the pans filled, as in the case of pot Vines. Dry corners must receive an extra charge from the syringe or fine-rosed watering pot, or these spots neglected will quickly encourage a colony of spider or thrips, which may prove a source of annoyance the whole forcing season through. In the cases of Vines whose roots were lifted in autumn, and consequently lie near the surface, I would advise that the daily moistening of the surface of the border be supplied by the syringe rather than by the watering pot, as saturation prior to the formation of numerous fresh rootlets may result in wholesale decay. Where a rod of Muscat of Alexandria or Madresfield Court occupies one end of the house, the ventilators, if not on the continuous system, may well be left closed at that particular point, these varieties, of course, requiring extra heat, particularly in the early stages of growth. In the majority of cases the crop of Lady Downe's may now be cut and bottled, the berries after this date keeping more satisfactorily in the fruit room than on the Vines. As these Vines are not as a rule started until March, and then very gradually, root-lifting—where this is found needful, and additional soil for incorporating can be secured in a dryish state—may now be carried out. This remark, of course, applies to Vines rooting in an inside border. Touching the pruned wood

with styptic, thorough cleansing of glass, walls and woodwork, top-dressing where lifting is not necessary, together with a continual circulation of pure air, a few degrees of frost being rather beneficial than otherwise, must be the programme of the cultivator for the next two months and a half. Where the soil is light and the rainfall under average, wooden shutters which have been used to cover the borders may now be removed, at least for a time, the same being easily replaced should a long period of rain or snow intervene.

**LATE PEACH HOUSES.**—All preparatory work, more especially pruning of the trees in these structures, demands immediate attention, as the season, so far very mild and open, has induced expansion of bud in many varieties already, and the application of insecticides will soon be risky. Any blanks or faulty trees may still be made good from the open wall or nursery lines, as these, being subject to no undue forcing in spring, form fresh fibrous roots at the same ratio as the new growth. In planting keeping the roots well up towards the surface, adding abundance of rubble with the staple, with firm ramming, must be strictly observed, training, of course, being postponed until all fear of settling is past. Sea Eagle will be

should now be headed down. Where for various reasons orchard planting has not yet been done the work may yet be carried out with every prospect of good results, the winter thus far having proved so mild and free from heavy rains that the ground still retains a good percentage of the latent warmth of summer. Pruning also and thinning amongst Apples generally may now be proceeded with, avoiding a too free use of the saw amongst young trees especially, as our uncertain springs are best combated by a good amount of spray, this shielding the bloom and securing a set of fruit. The biennial system of turning up the surface of Grass laid orchards has much to recommend it, short rich stable manure spread over the upturned sods further enriching the soil, its virtue being washed down by winter and spring rains. Of course this does not apply to heavy soils, which are better treated to a broadcast sowing of some approved fertiliser in March or April.

JOHN CRAWFORD.

## CHRYSANTHEMUMS.

### JAPANESE CHRYSANTHEMUM VIVIAND MOREL.



Flowers of *Chrysanthemum Vivian Morel*.

OUT of all the many excellent varieties of exhibition Chrysanthemums, the palm must, I think, be unanimously awarded to Vivian Morel. It is what may be taken as a genuine type of the true Japanese Chrysanthemum, and the great favour with which it is regarded by growers and the frequency with which it is shown are sufficient evidence that its value is of no ordinary degree. Vivian Morel is a seedling from a rather noteworthy set. It was raised by M. Louis Lacroix, and sent out by him in the spring of 1890 with about a score of other novelties. The best of these, speaking, of course, from a purely English standpoint, are Vice-President Audiguier, Mlle. Marie Hoste, Sylphide, and Cléopâtre, all of which have attracted some attention here, although it has been reserved for their companion Vivian Morel to excite the keenest interest. At times we hear, and perhaps not without undue cause, of the exaggerated descriptions which are appended to the new French Chrysanthemums by their raisers. It seems to me, however, that those who are loudest in their condemnation do not make a proper allowance in this matter. These new French seedlings are grown and flowered in the open air, beneath a bright blue sky in the pure, clear atmosphere of Southern France. The French descriptions are consequently written from blooms obtained under such climatic influences, and when these plants are transferred to the neighbourhood of London, to be grown beneath our dull, smoky sky and flowered in a greenhouse, small wonder is it that the flowers belie the descriptions given to them by their raisers abroad. But whatever the case may be with other varieties, the charge does not hold good against the raiser of Vivian Morel, for the description by Lacroix was as simple and as fair as anyone could expect, and I give it translated word for word, viz.: "Vivian Morel (Lacr.).—True Japanese; blooms of the largest known, opens spirally, long petals of a fine soft rose, sometimes striped white; blooms in large clusters, very double, extra." The only part of this that seems to be immaterial is the blooms coming in clusters, a point of no interest to English growers, who do not allow their buds to come in that way at all, but to French growers who prefer quantity to quality, a matter no doubt of considerable moment. The catalogue being in French, is on the face of it scarcely intended to lead English purchasers astray.

found a good reliable Peach for late work and of good flavour.

**GOOSEBERRIES.**—In places at all liable to the attack of the dreaded caterpillar, lime and soot may be freely distributed around the stems and on the soil beneath the trees generally, to be afterwards forked in to a depth of 1 inch. This will have a tendency to destroy the grubs and eggs which may be located there. Cuttings of Gooseberries and Currants may still be inserted on any spare piece of ground, not necessarily exposed to the sun, although such a position is best. The ground should be in good heart and well firmed, the individual cuttings averaging in length from 9 inches to 1 foot. Some advocate removing all buds, save four or five at the summit; but this is unsafe, as sometimes sparrows or tomtits play havoc, leaving no buds to break into growth. The safest way is to allow every bud to remain intact until April; then to remove the stem ones, leaving four or more to form the head of the tree. Where the cuttings are inserted behind a north wall and the soil is at all inclined to be wet, mulching with dry litter or spent Mushroom manure will protect the base from severe frost.

**APPLES AND PEARS.**—Any trees intended for grafting should now have their branches shortened back to the proper length in order that the wounds may effectually callus over, and canker be thus avoided. Stocks also of Quinces and Pears

It was not until the autumn of 1891 that Vivian Morel was shown at the Aquarium in any numbers, although a first-class certificate was awarded to

Messrs. J. Laing & Sons in the autumn of 1890 for it, which award appears to have been repeated the following autumn, when the variety was staged by Mr. Owen. The R.H.S. also granted an award of merit to Messrs. Laing in 1890 for it, and, starting well, Vivand Morel has up to the present maintained the good opinion formed of it. It is not necessary to refer the reader to the audits which have been published showing the number of times Vivand Morel has been staged each year since its introduction, but it may be mentioned in passing that the first year after its introduction fourteen blooms were exhibited at the Aquarium show, while at the same place last November there were one hundred and seven. And this number does not include the classes for six blooms of one variety in which there were two stands of Vivand Morel, or twelve blooms more.

Whenever a good variety has made a name the growers are always keenly on the look out for a sport, and they had not long to wait in the case of the lower now under consideration. Mr. Davis, of Camberwell, was so fortunate as to secure a beautiful yellow sport, flushed with rosy-bronze, which he named Charles Davis, and which bids fair to be quite as great a favourite as the parent flower, for although it has only been in cultivation a year, it was shown eighty-nine times at the last November show at the Aquarium in the cut bloom classes, and twice in the class for six blooms of one variety.

One of the most curious facts, however, in connection with the sporting of Chrysanthemums has been remarked before, and it is that a variety, after being in cultivation for a time, will suddenly sport in several places far distant from one another and produce the same kind of flower. About a year ago Mr. W. Wells secured from Vivand Morel a pure green sport, which he has named Ethel Amnden, and I have since learned that my friend M. Fitzer, in the department of the Aisne, France, has had an identical experience. Although I have seen both of these green varieties, the French one seems to be the larger, and, I believe, will be distributed under the name of M. E. Tisserand. Whether they will prove to be the same when grown in the orthodox exhibition style is a question that time alone will prove.

C. HARMAN-PAYNE.

THE TECK FAMILY IN MIDWINTER.

It is now-a-days quite an easy matter to have a good supply of Chrysanthemums at Christmas and the new year. The varieties that lend themselves most easily to this form of culture and that are favoured by market growers belong to the Japanese and reflexed sections. At one time Princess Teck was rather largely grown for midwinter bloom, and then came its purer sport Lord Eversley, which had but a brief run of popularity. Just at that time such grand midwinter kinds as Golden Gem and Boule de Neige came into notice, and change of taste decreed that the high position held by the incurved kinds generally should be taken by the Japanese varieties. It must be admitted that the great bulk of Princess Teck blooms brought into Covent Garden were of indifferent quality. The plants were grown in the rough and ready way usually practised in market gardens, and the incurved varieties generally do not submit to this treatment so well as the Japanese and reflexed kinds.

A limited number of well-finished blooms of Princess Teck and its varieties still, however, finds its way into Covent Garden, and these, it is almost needless to say, are obtained from plants in pots. So far as I am aware, there are no other incurved varieties that lend themselves so well to this form of culture. One could scarcely desire anything better, for the Teck family gives us white, blush, yellow, bronze, and, including the old Hero of Stoke Newington, a shade of pink. I think that good blooms of Mrs. Davis and Lady Dorothy, cut with long stems and abundant healthy foliage, have a fine appearance in Christmas and new year decora-

tions. To get them at that season some judgment is required, for if the plants bloom too early the flowers are past their best when most valuable, and if retarding is carried too far the blooms will not incur, and one may just as well grow the reflexed varieties. It is necessary to time them so that the flowers are fully expanded by about December 10. If they have to finish off after that date they do not seem to be able to close up the centre, and generally present a rough appearance. Such at least is my experience. Early propagation is neither necessary nor desirable. The middle of February or, if the cuttings are strong, the beginning of March is quite soon enough. Grown along in the ordinary manner, they will be ready for 7-inch or 8-inch pots by the beginning of July. About the middle of June they should be stopped for the last time, and just at this time they need a little watching. I have found that the Teck varieties when stopped so late are apt to break badly, especially should the weather happen to be very hot and dry. The wood hardens, and some shoots will frequently refuse to break again. When they have been stopped a few days, it is well to give a couple of waterings with liquid manure, at the same time well syringing three times daily. This will give them a fillip, and will cause the young growths to push out more freely. At the same time watering must be conducted with some care, as topping checks root action. I have always made a point of not housing the plants till nearly or quite the middle of October. They may remain out a week longer if the weather is mild, for the longer they can be kept outside the more likely is the foliage to remain in good condition until the close of the year.

Owing to the late date at which the plants get their last shift, they do not need stimulants so much as those grown in the ordinary way, but they will require a certain amount of feeding. This should be continued in a greater or less degree through November, after which time only clear water should be used, as root activity is then on the decline. Plants intended for midwinter bloom ought to have more room when housed than the midseason ones. There should be a clear space between them, or many of the leaves will turn yellow, and it is impossible to get good incurved blooms at Christmas from plants that are in a great measure defoliated. They must, moreover, be near the glass and where they will get abundance of air when the weather is favourable. Very good blooms can be had in 6-inch pots, and this size is in many instances preferable, as small plants can generally be better accommodated through the winter than when grown in 8 inch pots.

J. C. B.

**Chrysanthemum Black Prince.**—I find there is already a Chrysanthemum named Black Prince in commerce, consequently I have changed the name of my variety from Black Prince to Owen's Brilliant. This is the variety to which the R.H.S. floral committee gave an award of merit on November 27 last.—R. OWEN.

**Chrysanthemum Golden Wedding.**—Is not over-feeding the cause of so many failures with this variety this season? I note "H." (p. 514) makes mention of this disaster of dying off being almost proverbial. My neighbour, Mr. Austin, of Witley Court, has been most successful with Golden Wedding this season, there not being any sudden dying off, which so many growers have been troubled with. The plants at Witley were decidedly under-fed, neither were they over-watered, being kept well on the dry side.—A. Y.

**Chrysanthemum Bouquet de Dame.**—In England this French-raised Japanese Chrysanthemum is rarely met with on an exhibition stand, but in Scotland it is shown frequently, and in such a condition that I could hardly have thought was possible. Such blooms as I saw in Edinburgh, Glasgow and Dundee I have never seen equalled in England. The Scotch-grown blooms were exceptionally deep, the florets broad and of the purest white.—E. M.

KITCHEN GARDEN.

THE MILD WEATHER AND VEGETABLES.

THE weather up to near the end of December has been remarkably mild, while the atmosphere, as usually happens in such cases, has been very moist and the rainfall comparatively light. This state of affairs has proved very favourable to planting and such like operations, and the coal or coke bill no one ought to grumble at, but, all the same, there is another side of the picture to be taken note of. As far as green winter vegetables are concerned, these have never been more plentiful nor, I think, better in quality, but so full of sap and vigour are most of them, that it only requires a moderately severe frost to cause an utter collapse. At the time these notes are being penned, so little like a change to severe frosts and cold weather generally presents itself, that it would appear useless to suggest preparing for wintry weather, yet there ought to be something done with Broccoli, Borecoles, Savoys, and Coleworts in the way of massing some of them together with a view to being able to quickly cover with mats or other protecting material. Should we not experience any very severe frosts, there will have been no labour wasted, as the very fact of lifting and laying in a quantity of the kind of vegetables named would serve to check their growth and be the means of providing a longer succession than would be the case if left alone and mild weather still continue; while if severe frosts do visit us, then there is a likelihood of the protected vegetables being the sole survivors. It is not growing vegetables only that are behaving different from what we wish them to do during the present winter, but some of those stored are being injuriously affected by the mildness of the weather. Onions were none too well matured last autumn when stored, and would probably have largely commenced growing afresh earlier than desirable in any case. As it happens, the mild weather has started them wholesale, especially where the precaution of roping or bunching them up and suspending in cool, airy quarters was not taken. In some instances storing in heaps in comparatively warm dark corners has already spoilt all that are left, a mass of shoots, roots, and decay taking the place of what should have been good sound bulbs for some time to come. Now, running short of Onions is a serious matter in most cases, and something ought to be done in the way of finding a substitute for sound Onions. Instead of throwing these apparently worthless Onions away, they ought all to be planted out on a border or quite in the open thickly in rows 1 foot apart. If they are only just starting, then keep them where they are and as cool as possible a month or six weeks longer, but if far advanced in growth, plant out all the more forward at once. A very severe frost would perhaps damage the young leaves, but they will stand more frost than will the dry roots, and should therefore be risked. The flower-heads should be pinched out directly they show, and eventually small roots thus treated will grow into larger ones, while the larger ones will divide into several, after the manner of Shallots, in each instance. Seeing that these Onions are wanted for early use, there would be no sense in leaving them to attain a fairly large size. Instead of this pull some as they are wanted for use, remove the outer or old skins, shorten the tops, divide those needing it, and there is then a serviceable bunch of young Onions, or Scallions, as sometimes termed, ready for use.

Where Onions are likely to be scarce, save as many Leeks and Shallots as possible, as these keep till quite late in the season, and are excellent for flavouring soups and such like.

Turnips are very plentiful and good in quality, but those stored are sprouting strongly, and the older roots left in the ground are beginning to run to seed. Both sprouting and forming greens or flower-growths have a most prejudicial effect upon the roots, rendering them of little value other than for flavouring. Both ought to be prevented as much as possible. A few minutes spent occasionally in turning a heap of roots and rubbing off the sprouts, if done in good time, would save them for several weeks longer, while if the roots in the ground are wanted for cooking, these, or a portion of them, should be pulled, topped, tailed and stored in a cool place or in a heap and strawed and soiled over. Late sowings have continued to make root-growth, and as yet there are no signs of these running prematurely to seed. All the same, I would advise storing a portion of them. Not till the supply is really exhausted do the more experienced gardeners realise what trouble they are likely to have with the cooks, Turnips being well-nigh regarded as indispensable. Much may be done towards forwarding a supply in frames on very mild hotbeds, but it is far less trouble to take good care of the old roots.

Should the present mild weather much longer continue, Celery will keep badly in many instances. Already I have seen several "sticks" showing, when cut open, that they are running to seed, and it will not be so very long before the hearts are practically worthless, always provided nothing is done to check this untoward occurrence. Sharp frosts or a spell of cold weather would do much towards checking bolting, though I do not advise waiting very long for this to come. It is not always the earliest sown that are the first to bolt, and it would be well, therefore, to test the plants in the various rows. Any fit for use and showing signs of running to seed should be first dug and good care taken of that still right at the heart. Lifting, tying strips of raffia round the stalks and replanting somewhat thickly and deeply in a fresh and, may be, cooler place are frequently practised later in the season; but the question is, would it not be better in many instances to take this precaution now, and thereby check heart growth? If laid in more closely, quite as much covered with soil as before, and, in addition, roughly covered with mats or dry straw litter whenever severe frosts are imminent, might be the means of saving a good supply from the destructive effects of frosts as well as retarding bolting.

Parsley is even more indispensable than either Turnips or Celery, and this season it has been hardened off so little, that the chances are frosts would destroy it wholesale. Nothing transplants more readily, and if a few deep boxes or pots were closely filled with strong plants, taking particular care of the principal root or underground stem, these could be placed in either pits, frames or houses and kept in reserve. Even if the outside supply does not fail, there is yet a likelihood of the early growth formed on the roots under cover proving very acceptable in April or May. Parsley can be forced as readily as Carrots, the seed being sown in frames on hotbeds in much the same manner; but once more let me advise my readers to preserve the old plants.

SELWOOD.

best. This is the way I have kept mine for many years, and that with the best results. In proof of this I have in my fruit room a good sized bulb that was ripened in September of 1893; consequently it has been out of the ground sixteen months, and now it has sprouted 2 inches long. This bulb was strung with others in ropes and hung close to the roof of our potting shed all through last winter, and only removed after Midsummer Day into the fruit room. By keeping in this way I generally have good sound bulbs till the end of June. Mr. Temple, when at Impney Hall, used to keep his Onions in this way. Undoubtedly many of the old kinds are far better keepers than some of the new kinds. J. CROOK.

**Hardiness of Onions.**—Like "J. R.'s" (p. 479), my mode of storing Onions is the reverse of "W. G. C.'s," as given at pages 408 and 409. I have never stored mine in a close room or building of any kind, and in my opinion the more airy, cool and exposed the place that can be given the better. The bulk of my Onions, some forty or fifty bushels, are tied in bunches and hung to the rafters of a dry, airy shed, the bunches not touching each other, but fairly close, and they keep grandly. I have tried the plan advocated by "W. G. C." and failed. I think the more the bulbs are exposed in a dry place, free of straw or other covering, the better. I do not like the plan of laying Onions on the floor or even on racks, except when drying after lifting. I have found them decay and grow out badly.—S. G. J.

#### SEAKALE CULTURE.

It is a significant fact that while the majority of vegetables suffered more or less from the great heat and absence of moisture in 1893, Seakale seemed to be suited to a degree. Growth, whether in permanent beds or in those planted with root thongs in the spring, was both early and vigorous, resulting in well-formed and prominent crowns, from which the foliage parted in October in a perfectly yellow and ripe condition. These roots, when lifted and placed in heat, responded readily, producing good supplies of stout Kale in a minimum of time. Last season, however, though the cuttings were much stronger than usual and well sprouted at the foot of a south wall previous to planting, growth was not nearly so satisfactory, proof that, however good the general cultural treatment may be, sun, and plenty of it, is indispensable to secure the best results. Seakale is an important winter dish in all first-class establishments, yet how often do we find it growing in about the worst possible positions, perhaps associated with Rhubarb and Jerusalem Artichokes in some out-of-the-way corner, shaded by high walls or trees, and in wet, heavily manured soil. Under these conditions, by no means good, though prolonged, growth ensues, the leaves often continuing in a green state well into November, finally being smitten by frost and rotting instead of ripening. That Seakale does not require such rich ground as is generally supposed is proved by old permanent beds which have been forced for ten or twelve years by the old-fashioned method of pots and leaves. These from the time they were planted have received no stimulant, save perhaps a little ordinary manure which has been pricked into the surface in spring, yet their vigour and productiveness are maintained. For the accommodation of first early batches a south border is to be preferred, although where ground is scarce such a site cannot always be spared. If the ground is in pretty good heart the Seakale may follow some other ordinary crop without any further preparation save digging and making firm. As each batch of crowns is lifted for forcing, all the stout rootlets should be cut into lengths of

some 4 inches of 5 inches, and the top from which growth is expected made quite smooth with a sharp knife. They should then be dibbled into boxes or frames of light sandy soil, and the cut portion covered with silver or river sand to induce a speedy callus. Failing these receptacles, the foot of a south wall will answer well, light leafy soil being used for imbedding. If the early part of the year is very mild the cuttings must be watched, as sometimes the new succulent growths will push through the soil and fall a prey to frost. A little covering of soil will avert this. When making the cuttings is postponed till planting time a whole month is lost, and crowns suitable for early forcing cannot be expected. As a rule the first week in April is a good time for planting, at which time the tender growths should be reduced to four or five on each cutting. A space of 2½ feet between the rows and 18 inches between each plant is not too much, each cutting being lowered, just beneath the ground level and slightly wounded over with soil to shield from frost. When 6 inches of growth have been made, the leads must be further reduced to two or at the most three to each stool, these being as many as can be properly exposed to sun, light, and air. Where the earliest batch occupies a south sunny border, should the summer prove hot and dry, a slight mulch of spent Mushroom manure may be given, and one or two waterings with liquid manure. Towards the end of October it is a good plan to force a spade down on either side of the stools to sever some of the strongest roots, and thus hasten ripening and rest. In regard to flavour in Seakale, I am of opinion that none equals that grown under pots and leaves, the moist vegetable ammonia given out by them seeming to impart a special sweetness. When forced indoors the roots should not be placed too near very hot pipes or in dry corners, as under such conditions growth is invariably not only spindly but watery and insipid. Several growers for market in the neighbourhood of Bristol allow plenty of room between the rows and stools and lift every other row to force. In spring the crowns in the remaining rows are covered with flower-pots, the latter being finally banked up with the soil from the intervening spaces. Thus a late supply of good white Kale is secured. When cinder ashes or leaf soil is used for mounding up in spring, the crowns are very apt to push through the compost, becoming not only green and insipid, but unsightly when placed on the table.

J. CRAWFORD.

#### COLOUR IN BEETROOT.

THE roots of Beetroot with a dull crimson or nearly black colour are, I think, inferior in quality to the lighter coloured roots. I am aware colour does not always denote high quality, as some of the Egyptian or Turnip-rooted Beets are of a pale colour, but nevertheless of good quality when quickly grown. I recently asked a large grower as to the demand for light-coloured roots, his answer being that the few who understood good quality in vegetables always selected small or medium-sized roots in preference to large ones, and that he always was careful to supply those with bright red flesh, as these were less earthy in taste and always realised a good price. The flavour of Beetroot this season is different from that of last year. This is readily accounted for, as the soil being much warmer in 1893 growth was more rapid; whereas last year it has been slow and there has been much moisture. It may be said that early sowing has much to do with flavour. This I admit, and I do not prac-

**Notes on Onions.**—Notwithstanding all that has been written in THE GARDEN as to the keeping of Onions, I find that when bunched and hung up under the roof of cold airy sheds they keep



tise it for late roots, sowing the Turnip-rooted kinds for summer use. I am also aware soils full of manure do not add to flavour. Last season I secured three crops of Turnip-rooted kinds, sowing in March, June, and early in August, and the last roots were equally as good as the first and grew very quickly. This season later sowings failed completely. It may be said, why sow Turnip-rooted kinds late when good roots of the long section may be secured with far less trouble? The answer is that there is a great demand for the Turnip-rooted forms when about the size of a cricket ball, or even smaller, for salad, and I believe a much better flavour is secured from quickly grown roots. I grow the Turnip-rooted Beet on account of its quick growth and good quality. Cooking is also important. Among the larger red or light crimson kinds of good quality are Covent Garden Red and Cheltenham Green Top, one of the best flavoured sorts I have grown if sown late and in poor soil. Osborn's Select Red, Nutting's Red, a medium-sized root of splendid quality, and Pragnell's Exhibition are also good. There are others worth a place, but from a selection of some twenty varieties I have found those named above best as regards quality. W. S. M.

SHORT NOTES.—KITCHEN.

**Potato Windsor Castle.**—I have found this one of the very best varieties. Those who value quality in Potatoes would do well to give it a trial. Not only is there an absence of small tubers, but a great weight is secured from a limited space if the plants are not crowded. It may be described as a dwarf Magnum Bonum, and, like that well-known variety, is not liable to be attacked by disease. In thin or gravelly soils it may be planted closer than the Magnum and will yield a fair crop, but, given good land, crowding should be avoided.—G. W.

**Walcheren Cauliflower or Broccoli.**—Many years ago this variety was largely grown in the north, and if sown in April, May, June and July, good heads will be secured from June to December. I find this as hardy as the early Broccoli. For many years I have sown it in August from the 10th to the 20th for spring cutting. I do not know of any variety more reliable for standing the winter, and though it may be a few days later than some of the smaller growing Cauliflowers, it is more valuable on account of its hardiness and freedom from running or opening in warm weather.—S. H. B.

ORCHIDS.

PLATYCLINIS.

This small genus of epiphytal Orchids was formerly known in our gardens as *Dendrochilum*, and even at the present day this name is very frequently used. There are upwards of a dozen species known, these being distributed over India and the Malay Archipelago. Very few, however, are sufficiently beautiful to find favour with the majority of Orchid growers. Those generally cultivated are the species mentioned below, and all are found in the Philippine Islands. They flower at different seasons of the year, are very interesting when in bloom, and as they occupy but little space, they should find a place in every collection. These plants being natives of a very hot climate naturally require strong heat to grow them successfully under cultivation, and should be placed in the East India house or at the warmest end of the Cattleya house. Whilst making their growth they enjoy a liberal supply of water at the roots. During the resting season the plants should be kept dry, only enough water being given to keep the soil moist. The most suitable time to repot *Platyclinis* is

shortly after the flowers are past, and the compost should consist of chopped fibrous peat and Sphagnum Moss, the pots being quite half filled with good drainage.

**P. COBBIANA.**—This interesting species, introduced by Messrs. Low & Co., of Clapton, about 1880, usually blooms during the autumn months. It produces elongated, conical-shaped bulbs, each about 2 inches high, with lanceolate leaves three times as long. The flowers, light sulphur-yellow, with an orange lip, are borne densely upon a drooping raceme about 1 foot in length. These are somewhat similar to those of *P. glumacea*, but the plant is quite distinct in the formation of the bulbs, and, moreover, blooms at quite a different season. It first flowered in the collection of Mr. Walter Cobb. At the present time this species will just be commencing to start into growth.

**P. FILIFORMIS,** a much better-known species than the preceding, was first seen in flower in this country over fifty years ago, having been discovered by Cummings two or three years previously and sent to the Messrs. Loddiges, of Hackney. This kind grows to about 6 inches in height, and produces a filiform pendulous raceme of about 15 inches in length during the months of June, July and August. These racemes often bear fifty to sixty individual blooms, sometimes more, these being of a greenish canary-yellow and very small. The drooping spikes, which are freely produced, make it a very attractive plant. During the winter months this species should be quite at rest.

**P. GLUMACEA.**—This species will now be in active growth, and should be given plenty of water, as it will produce its elegant racemes during the spring months. The flowers, whitish yellow, are borne upon the apical half of the spike only, and have a pleasing fragrance. The pseudo-bulbs are ovoid and sheathed with brownish scales; the leaves attain 12 inches or more in length. This is one of the most desirable kinds, and a great favourite with Orchid lovers. It was introduced just forty-five years ago.

**P. UNGATA.**—A spike of this pretty kind is to hand from "T. W. O." for a name. The present season is its usual flowering time, and the spike received measures 9 inches in length; the blooms are large for this genus and of a greenish white, somewhat resembling those of *P. filiformis*. It is a very desirable plant, imported for the first time by Messrs. Low, of Clapton.

WM. HUGH GOWER.

**Twin-flowered Cypripediums.**—Twin-flowered *Cypripediums* appear to be unusually prevalent this season. On two of my largest specimens of *Cypripedium insigne* the flowers are showing in a similar way to that described by Mr. Wood. On looking at a plant of *C. barbatum*, I also observe a twin flower-spike. *C. bellatulum* a few weeks back was also the same, but the greatest number are showing on *C. Spicerianum*. Four of the largest plants of *C. Spicerianum* have every spike twin-flowered. It appears strange that only a few plants of this variety should show this tendency. This makes me think it is more a seminal variety than due to vigorous growth. I take this view because the largest and most vigorous plant is only single-flowered.—A. YOUNG.

**Cypripedium insigne of the Sarderæ section.**—Since the introduction of this most distinct and valuable variety by Mr. Sander, of St. Albans, many plants which have laid claim to rivaling *C. insigne Sanderæ* have flowered, but none, with the exception of *C. insigne Ernestianum*, have equalled it in colour. The flowers of *C. i. Ernestianum* differ in shape from those of *C. i. Sanderæ*, being more like those of a good *C. i. Chantioi* and of a clear apple-green, with a white margin to the dorsal sepal, which bears faint traces of spots where these are usually seen in the typical form. It is a very beautiful and distinct variety and makes a fine companion to Mr. Sander's form. These and others of this section have appeared from the *montanum* type, of which there have been enormous quantities

imported during recent years, and amongst them the following kinds have from time to time turned up, but although very fine and distinct, are, nevertheless, quite different from the two above-mentioned plants: *C. i. Macfarlanianum*, a variety with somewhat narrow segments; *C. i. Sanderianum*, a very clear flower, the spotting almost entirely absent; *C. i. Youngianum*, a very pretty kind and very similar to one recently named *C. i. Lutwyehianum*; and *C. i. Eyermannianum*, a variety of American origin and very distinct. These of themselves form a very pretty and interesting group.—W. H. G.

**Flowers from Pitlochry, Scotland.**—From Mr. W. Macdonald, Atholl, Pitlochry, comes a box of flowers, amongst which is a very curious malformed bloom of *Cattleya labiata* having seven segments, but with no proper lip, the two lateral sepals being the only parts of true character. The dorsal sepal and other four parts are all of the same shape and markings as are usually seen in the lip of an ordinary form—rich crimson, heavily suffused with orange at the base, and nicely fringed at the margin. Although very curious it is less beautiful than an ordinary bloom. The *Cypripedium* of the *insigne* cross was far too much damaged to say what it might be, but the dorsal sepals appear to have some fine purple spots. It may probably have been the result of hybridising a good form of *C. insigne* with *C. villosum* or *C. venustum*. A fine flower of *C. Boxalli* with richly coloured petals was also included.—W.

STOVE AND GREENHOUSE.

PELARGONIUMS DURING WINTER.

To be successful with these plants at their flowering time, they must not be neglected in the sunless period of the year, and important items of culture should receive proper attention now. In the case of the large-flowered or show and regal kinds, for example, we are apt to keep them too warm, and the growth becomes spindly, and perhaps attacked with aphides. Should the latter occur, lose no time in cleansing the plants by fumigating.

The temperature for all *Pelargoniums* should not go much above 50°. We want them to be steadily growing, that is all, and the pipes just warm enough to dispel damp. Of course this does not refer to plants of the zonal class which may have been specially prepared for winter blooming. Those of the show and regal type may be shifted into the flowering pots, and the principal things to consider are the sizes of the pots and the manner of doing the work. One thing noticeable about the plants we see in the markets is the small pots employed; and as I am not far wrong in saying that *Pelargoniums* are not generally well done in private gardens, the use of large pots in such places is a common error. Specimen plants may be grown in an 8-inch pot; a size or two less, therefore, is amply sufficient for ordinary use.

One need not be particular as to soil. I use with excellent results the old compost that has done duty in growing the *Chrysanthemums*. If this is saved when the plants are turned out and kept in a dry place, it provides a soil good enough for *Pelargoniums*, and where there is some trouble as well as expense in obtaining a supply of turf is economical. The old compost is merely sifted and a sprinkling of bone-dust added, then it is ready for use. Pot firmly. This is one of the secrets of successful cultivation. Ram the soil into the pots with a heavy stick, and the growth resulting from such treatment will be sturdy and short-jointed. A handful of half-inch bones at the bottom of each pot over the crocks is most beneficial. All classes of *Pelargoniums* are assisted by these; the roots

ramble among them and a healthy tone to the foliage is apparent when bones are employed. After the potting is done, give the plants a good soaking of water. This will last some time, for the aim must be to keep the roots on the dry side. See, however, that this does not reach the flagging point, for valuable plants are thereby often lost. They get too dry, and we at once give them a soaking. The roots may be already partly killed by being parched, as it were, and the water but adds to the damage done in at once soddening the earth. In this case it is always best to first damp the foliage as well as the surface of the soil slightly for a few days, and brighten the plant up before water at the roots is given.

Air in abundance should be given in favourable weather, and only just enough fire-heat to command the temperature mentioned. Unless the plants have become drawn up weakly, no stopping is required. Handsome bushes are best obtained if they are kept sturdy and allowed to break side shoots naturally. These should be tied out when young, so that room is made for others that will follow and space for their development given. If there be a superabundance of side growths, a little thinning out may be done. These young shoots, if put singly into small pots and placed on a shelf near the glass of a warm greenhouse, strike readily, and provide young stock in the event of the older plants losing health or being worn out by age.

Zonal Pelargoniums require similar treatment to that noted in the matter of water, and the leaves must be kept free from moisture at this time of the year. Where old plants which flowered in early autumn are past and have become leggy, a little trimming up should be done. If the shoots are cut back half their length there is little danger of decay, but when cut back quite close at this time of the year, we run a risk of killing the plants entirely. The tops may be used for providing young plants, and these should have the benefit of a warmer house than the parent plants are growing in. When rooted give the young plants a shift into 5-inch pots, and thus nice, fresh-looking specimens of a useful size for furnishing rooms and so on are obtained early in the season. The older plants need some attention at the roots as soon as fresh growth takes place. They may be turned out of their pots, a good portion of the old soil taken away, and returned to others very little larger than they before occupied. The fresh compost will give new vigour, as it has already been pointed out what a mistake the use of large pots is. There is also another class of the Pelargonium, namely, the Ivy-leaf section, in which the use of small pots is particularly necessary to successful flowering. These are of a very rampant nature, and the only means of getting a good quantity of flower trusses is by restricting the root-run. Varieties of this class, again, require timely topping, and they ought not to be allowed to form many joints at this time of the year before the tip of each shoot is taken out.

All Pelargonium plants should have ample room and be stood near the glass to benefit by light and air. They respond to feeding with stimulants when the flower buds show, in bearing fine trusses of bloom. Manures containing ammonia, such as soot and guano, are especially suitable. As the days lengthen, water in abundance will be needed, and keeping the plants on what is called the dry side no longer applicable. There is the opposite danger in not giving enough when the plants are growing in the small pots insisted upon. H. S. L.

#### RICHARDIA ALBO-MACULATA.

I do not quite agree with "W. W.'s" statement that this is only of botanical interest. I have grown it for some years, and find that, from a decorative point of view, it has considerable value. The flowers, it is true, are, as compared with those of *R. æthiopia*, insignificant; but a good-sized specimen with well-developed foliage is decidedly effective, and, being comparatively hardy, can be used where *Caladiums* and other tender variegated-leaved things are inadmissible. Unlike the Nile Lily, it goes to rest in the winter, and this is probably the main cause of its not being very much grown. For summer decoration in the open air it is, however, held in some esteem, being very much more weather-proof than many of the fine-leaved things commonly used. The tubers are very tenacious of life; they can be taken up in autumn, stored away dry and not one in a hundred will die. If left in the ground only a very hard winter will injure them. I have had them come through 20° of frost unharmed, and a cold, damp winter does not seem to appreciably affect them. I have no doubt that a moderate covering of some light material would ensure their safety in all but very heavy soils in low-lying situations. In such a high degree are the tubers possessed of enduring power, that I have kept some nearly two years out of the soil, and then they sprouted. I once had about a bushel of imported roots, and what they went through before they came into my hands would have killed most tuberous or bulbous-rooted things outright. This ability to retain vitality through a long resting period may be taken advantage of in a certain way. By keeping the tubers quite dry until August and then potting them the season of growth is reversed. They come into full leaf by the close of the autumn, and remain in good order all through the winter if given a temperature of about 50°. They can then be employed for any of the purposes for which such things are in request, and will remain in good form in a heated apartment all through the winter months.

J. C. B.

**Roman Hyacinths.**—The past season may now, we can reasonably assume, have been the best possible for the essential (or supposed) ripening of bulbous plants. Note the words in brackets, for I think it is possible that too much reliance is placed upon thorough ripening. Be this as it may, the one thing very evident in my case is the very satisfactory way in which Roman Hyacinths are flowering this year. I force them for cutting by the thousand for a private supply, and never remember to have had them so good in any previous season, the succession spikes being much finer than usual and in greater quantities also.—GROWER.

**Rogiera gratissima.**—Dwellers in the immediate neighbourhood of London can seldom enjoy the beauty of this Mexican shrub, as it is so susceptible to the fogs experienced during the winter months, that a few hours' exposure thereto will suffice to scorch all the leaves as if they had been burnt. It is certainly very beautiful when in a thriving condition, the dark green leaves being lit up by clusters of flowers somewhat in the way of the *Laurustinus*, but of a pleasing shade of soft pink. Like the *Luculia*, this will, as a rule, succeed better when planted out than in pots, and it needs a free circulation of air whenever possible. When in a thriving state not only do the individual flowers remain fresh for a good while, but a succession of bloom is also kept up for some time. This plant is now included in the genus *Rondeletia*, but it is far better known under the generic name of *Rogiera*.—T.

**Canarina Campanula.**—This is a decidedly interesting and at the same time pretty flowering plant, that produces its blossoms towards the end of the year. It is said to have been introduced into this country from the Canary Islands in 1696, but it is now very seldom seen, and may in vain be sought for in most nurseries. This *Canarina* forms a fleshy root-stock, from whence spring

stout succulent shoots that reach a height of a yard or two. These shoots branch out towards the upper part, and are there plentifully clothed with foliage. The flowers, which are there freely borne, are bell-shaped, drooping, and about the size of those of the garden varieties of *Abutilon*, to which they bear a considerable resemblance. In colour they are generally a sort of yellowish red, with deeper veins. This *Canarina* behaves in a very different manner from most of the occupants of our greenhouses, as it continues fresh and green for some time after flowering; then just as the majority of plants are in full growth this goes to rest, and continues in that state till early autumn, when it pushes up the stout shoots and grows quickly. During the season of rest it should be kept fairly dry, then, just as it is on the point of starting, it should be to a great extent shaken clear of the old soil and repotted. A rather light compost suits it best, and thorough drainage must be ensured. This last remark especially applies if it is planted out in the greenhouse, under which conditions it does well.—H. P.

**Rubus rosæfolius plenus.**—Some fifteen or sixteen years ago a considerable amount of attention was directed towards this Bramble as a very desirable subject for flowering in a warm greenhouse during the dull days of winter; indeed, it was then so much in demand that considerable numbers of it were to be seen in many nurseries. Now, however, it is rarely met with, though it is certainly very pretty and deserves more recognition than is accorded it now-a-days. It is not one of the rambling growing species of Bramble, but forms an erect bushy plant, that pushes up suckers freely, and soon forms a dense mass. The stems are thickly studded with hooked spines, while the Rose-like leaves are of a pale green tint and thin in texture. The flowers, which are borne in loose corymbs, are pure white and double. A few good healthy plants will keep up a show of bloom for some time, and that, too, when flowers are scarce. Another name for it is *Rubus rosæfolius coronarius*. It is easily grown. Cuttings strike root readily during the spring months if treated as other soft-wooded subjects.—H. P.

**Libonia penrhosiensis** is certainly one of the best winter-blooming plants we have, and when well grown is very effective at this season. It requires good culture however, and, like its congener *floribunda*, has a miserable appearance if in any way neglected during the growing season. In order to get well-budded specimens it is necessary to give the plants a long season of growth. Cuttings struck early in March will grow into good plants by the autumn if given high culture, but I have noted that the best results are obtained when one can start in the spring with young plants that have never had artificial warmth. *Libonias* may be easily propagated from cuttings put in during early summer when the wood is succulent, and these will come into small pots in which they are to remain till spring. If these are shifted into 4½-inch pots about the middle of March and then put into 6-inch ones later on they will make fine little specimens by autumn. *Libonias* require a considerable amount of sun and air, and when in full growth plenty of water.—J. C. B.

**Ipomæas.**—As a winter-flowering climber for the stove *Ipomæa Horsfalliae* is a distinctly ornamental species with very showy flowers produced in large trusses, which continue for a long time to produce the blooms, only two or three being expanded at once. The colour is particularly rich, quite different from anything in its season, a deep satiny rose. Although its flowers, like those of all of the *Convolvulaceæ*, are very fugitive, yet the succession in which they are produced makes full amends for this. A good mode of training it is up columns or rafters. It needs a fairly large pot to accommodate its large fleshy roots, but does not then require frequent shifts. It will thrive well in an ordinary stove temperature, whereas *Ipomæa Leari*, which has deep brilliant blue flowers, requires a moister atmosphere, otherwise it is very liable to red spider. This latter variety is much more rapid in growth, flowering

earlier, also being usually at its best during August and September. Preferably I would grow *I. Leari* in an aquatic house, upon the roof of which it would simply revel. *Ipomœa Quamoclit* is an annual stove species which, I should gather, is extremely handsome in its native habitat, from which I have had seeds of it sent as well as from India. It is of very light and elegant growth, but under cultivation does not, unless very favourably circumstanced, flower so freely as one could wish. From imported seeds I have had dark red, yellow and white varieties. It only needs small pots, a good means of support being small sprays of Birch. *Ipomœa rubro-cœrulea* does not appear to be grown so much as it deserves, owing probably to its blooming during the summer, when the flowers would not last many hours in perfection. For it there cannot be a great call, if trade plant catalogues are to be taken as any criterion, for in two well-known ones it is not included.—GROWER.

**Echeveria retusa.**—It is somewhat a matter for surprise that this very easily grown and free-flowering winter plant is not met with in larger quantities in private gardens, where it would be very useful. The market growers are waking up to its merits, and some of them grow it largely. It will flower about now without any difficulty in a light dry greenhouse, a shelf near the glass being a good position for it. Its propagation is of the easiest, the young plants being kept in the full sunshine out of doors all the summer. Only a 6-inch pot is required to produce a good useful plant.—GROWER.

DAFFODILS FOR FORCING AND POT CULTURE.

No time should now be lost in introducing these as required into warmth for forcing. Properly planted in due time in September and October and given sound healthy bulbs, they will now be well rooted and ready to flower when under glass. Those put in to form the first early batches are coming away nicely, but in these, as in all else that is forced exceptionally early, size of flower and often colour, too, are wanting. Length of stem is invariably wanting, no matter what the quality of the bulbs or the treatment accorded, so that it is no gain in private gardens generally for the sake of a few days in their flowering to destroy, or at least diminish, the length of flowering stem in these exceedingly useful and much-admired flowers of spring. Planted early and deeply covered with ashes or cocoa-nut fibre and given a long season in the open to form roots and commence their growth, success is in the main ensured—indeed, the flower-buds will be almost in sight as soon as the bulbs are taken from the plunging material, while the growth will be from 2 inches to 3 inches high and the bulbs a mass of roots. Where required only for producing blooms, pots 7 inches or 8 inches across are very useful for the purpose. When first removed from the plunging bed it will be best if the entire batch be transferred to a frame or pit from which frost is excluded at all times. The bulbs will also benefit if darkened with mats for a day or two and given a sufficient watering to carry all dirt fragments to the soil. If, of necessity, they must be taken to the greenhouse at once, take care the house during the first week is kept at about 45°, and if the weather is mild freely ventilated. Under these conditions all will be well. The dull weather and the humidity of the past few days are just suited to these plants at this time. Heat may be turned on slightly in about five or six days, limiting the maximum temperature to 55° by fire-heat. When growth has well begun take care the bulbs receive no check from insufficient water at the root, giving weak liquid manure every week till the flowers begin to colour. Syringe daily or twice daily if bright and generally maintain a moist atmosphere. The varieties best suited for earliest work are the Tenby Daffodil (*N. obvallaris*) and the common double yellow Daffodil (*N. Telamonius* pl.). Quickly following these come prin-

ceps, pallidus præcox, Golden Spur and Horsfieldi. *Poeticus ornatus*, however, must be named as indispensable, though at the same time somewhat fastidious when forced. This variety, more than all else, will not endure hard forcing, but by a gradual preparation and introduced by degrees into the temperatures named, this valuable variety may be brought well through the ordeal. Always place the pots, pans or boxes on a cool bottom. E. J.

**Bamboos as conservatory plants.**—As bearing out the views of "A. H." (p. 150) with regard to the value of Bamboos in the conservatory, I may mention that at Witley Court, in the large winter garden there, are several Bamboos growing in pots. On each side of the main entrance there are two very handsome specimens of *Arundinaria falcata*, each about 14 feet high.—A. Y.

**Jasminum grandiflorum.**—During the autumn, when the trade sales are being held, this variety of Jasmine is frequently met with as a dwarf plant, with an occasional truss or two of unexpanded blossoms. These are frequently propagated by grafting, which, I have an opinion, tends to make the growth more dwarf than it would otherwise be if cuttings or layers are the modes of propagation. Cuttings do not always strike freely, hence grafting comes in useful; but layers can be relied upon in course of time to make very useful plants. It is vigour that is wanted in this Jasmine, for it is as a climber that its usefulness is most manifest. Even then it is not one of the most rapid growers, but its progress, if a little slow, is just as sure. My mode of treatment has been to plant it out in good soil, peat and loam in about equal proportions being used. The plant in question was trained near the glass, so that the shoots had all the benefit of the light, no shading being in use where it was. Thus treated it grew quite strongly, making lateral shoots, thus adding to its free flowering—this being one of the terminal flowering species rather than a lateral one, as in *J. nudiflorum*. Flowering as it does during the late autumn and winter, it is extremely useful for cutting, making up well in either sprays or button-holes. Its fragrance is delicious, but not overpowering. It resembles most nearly *J. officinale*, but is quite distinct from that species. To grow it thoroughly well it should be planted out in a cool stove or temperate house; an ordinary greenhouse is scarcely warm enough for it to make a free growth. Pruning is rarely needed.—H. G.

**Jasminum gracillimum** is a worthy companion to *J. grandiflorum* and totally distinct from it, having hirsute foliage, as compared with the lustrous shining lark green of the other species. The species in question is a great advance upon *J. Sambac*, having flowers somewhat similar, but it is much more free in producing them. It should be grown in a warm or temperate house in order to encourage a free growth. I have kept it in a house that often falls to 40° during frost, but it did not thrive well. The best position for it, I find, is when trained as a rafter plant. In this way it is seen to the best possible advantage when in flower during the winter months. Its greatest enemy is the white scale, which seems extremely partial to it. What pruning is needful should be done after flowering.—H. G.

THE WINTER-FLOWERING JASMINE. (JASMINUM NUDIFLORUM.)

No variety of this beautiful race of plants is more in request perhaps than the species in question. It is a most popular plant, and that most deservedly so, being seen at its best on a warm wall with a southern or western aspect. In such a position it will flower earlier and oftentimes yield a wealth of blossom before the frosts are sufficiently severe to mar its beauty. For the covering of eastern or northern walls it may also be planted with safety, but on these aspects its earlier flowers are more liable to be caught. For the purpose of covering arches or gateways it is also very suitable. This Jasmine does not appear to be at all particular as

to soil; it must be poor indeed if good growth is not made. I have often been struck, if not actually amused, at the want of taste and lack of common sense in its management. Only just recently I saw an example that had been clipped as close (and correctly, I suppose) as if it were a Quick-set hedge. I hope the operator afterwards felt gratified by the results he had accomplished; no doubt the neat appearance was his satisfaction. Poor indeed, however, would this be to the pleasing effect of unpruned plants now in their full beauty. What possible pleasure there can be in this intolerant use of the shears I cannot possibly conceive. The growth even in itself of this Jasmine is very light and pretty, thus affording no excuse for mutilation whatever. After the flowering season is over then is the time to do any thinning out or pruning, a deal of the latter work being done in cutting the shoots when wreathed in blossom. Tie the growths in then so as to secure the plant for the next twelve months, but in the name of common sense do not afterwards attempt any more so-called work. When planted alone this variety leaves a bare appearance upon the walls during the winter unless the growths be very thick. To remedy this I would advise that it be planted or intermixed with *J. revolutum*, an evergreen species flowering during the summer, not so profuse perhaps as *J. officinale*, but none the less beautiful. *J. revolutum* and *J. nudiflorum* planted alternately and allowed to grow together would look well. In my own case I have a groundwork of a small-leaved Ivy close to the wall over which the shoots of *J. nudiflorum* are merely secured; this when in flower has also a very pretty effect. Amongst other climbers also it may be allowed to grow wild; its foliage being so very small, it can hardly do any harm. J. H.

WHAT'S IN A NAME?

Most of your readers will probably agree with "J. C. L.'s" somewhat cynical letter under the above heading, but none more strongly than I do, for this frequent change of names is a positive nuisance, which all amateurs must feel, for it is distinctly annoying to have to learn a new name for a friend of many years standing. I could quote very many examples, but will select only one, and that because in my case it had its humorous side. Many years ago one of your frequent correspondents, a great authority upon correct naming, kindly sent me a short note saying that he enclosed some seed of *Hyacinthus candicans*. When two or three years afterwards I told him how successful I had been in flowering *Hyacinthus candicans* from his seed, he seemed quite pained, remarking, "My dear sir, please never say that again; there is no such plant. I presume you mean *Galtonia candicans*." Naturally I was not loth to make the most of my opportunity.

There is, however, quite another aspect of the subject to which "J. C. L." does not allude, viz., the use by nurserymen of Latin names in their catalogues when English ones would certainly not tempt the average amateur. In this case the only possible answer to "What's in a name" is, I fear, "money."

As an example let me give the following extract from a well-known Dutch catalogue of this year's date: "*Cynara Scolymus*, purple, 1s. 6d. A noble plant, 3 feet to 6 feet high, growing well in a rich soil; flowers in early autumn. This is one of the most striking plants when seen isolated in the grass in the picturesque flower garden." Now this has appeared annually for many years, and in the days when I knew so very little that I used even to order plants from the description in catalogues, I bought a plant of *Cynara Scolymus*, only to find that there were two good rows of this "most striking plant" in my kitchen garden, and so for 1s. 6d. I learnt the Latin name of the Artichoke! Do you not remember how when there was rather a rage for Marguerites a smart nurseryman sent out *Chrysanthemum segetum*, describing it as a golden Marguerite and charging 2s. 6d. a packet

for the seed? I fancy he found a good deal of money in that name, and probably helped to get rid of one of the most troublesome weeds in his own garden (judging from its situation) at the same time.

Having had my grumble, I will not multiply examples, but conclude by mentioning one change of name that must have come as a great relief to many. I mean when the authorities re-christened the *Imantophyllum*, thus incidentally getting over a difficulty in the treatment of the poor letter "H," a difficulty which always reminded me of the old story of the American who had his cards printed "Awkins" for use in London, and was consequently generally addressed correctly.

A. K.

## NOTES OF THE WEEK.

**Carnation Countess of Far's** has done remarkably well here, and I do not know of a more profitable variety for cutting. Last spring I had a house full of plants in bloom in 6 inch and 7-inch pots, quite a sight. Some flowers were quite as fine as those of *Malmaison* and bright pink.—H. BECKER, *Jersay*.

**Aster cabulicus.**—There is a clerical error in the printing of Mr. Baker's note on p. 495 which has probably escaped his notice, and as it is adopted by "J. C. L." on p. 550, it is as well that it should be corrected. The modern synonym of *Aster cabulicus* is *Imeroglossa albescens*, a name which does not exist in botany, but *Microglossa albescens* (see Hooker's "Flora of British India," vol. iii., page 257).—C. W. DON, *Edge Hall, Malpas*.

**The season in Worcestershire.**—If the present abnormally mild and spring-like weather continues, the banks and copses will soon be all aglow with Primroses. Already there are quantities of blooms to be seen. Snowdrops are pushing through the soil fast, and will soon be in full flower. Even the *Daffodils* are showing up. Several good blooms of *Rose Gloire de Dijon* are also to be seen on a bush in a sheltered nook.—A. YOUNG, *Abberley Hall, Stowport, Dec. 29*.

**Chrysanthemum Mme. Bergmann.**—I send you a bloom or two of that excellent late *Chrysanthemum Mme. Bergmann*, as I see no mention of it in "E. J.'s" article a fortnight ago. In growth and effect it is much like *Phœbus* now so popular, and, unlike that variety, which is so early, *Mme. Bergmann* is as late as any *Chrysanthemum* I know. The colour is so rich and full, that even that of *W. H. Lincoln* looks pale by its side.—EDWARD H. WOODALL, *St. Nicholas House, Scarborough*.

**Winter Sweet at Claremont.**—I think you will be interested in the enclosed good specimens of two distinct types of *Chimonanthus*. The form *grandiflorus* is very fine this year. The tree is a very old one, covering a stretch of wall 25 feet by 13 feet. Since the beginning of December it has been a mass of flower.—E. BURKELL, *Claremont*.

\* \* The flowers of each form are very large and show how well the soil and other conditions suit this most precious of winter-blooming shrubs.—ED.

**Desfontainea spinosa.**—I send you a flower of *Desfontainea spinosa* that you may see how long the plant continues in bloom. It has been growing in the pleasure grounds here more than thirty years and has not been without blooms since July. It usually continues blooming until the first sharp frost in the autumn, but the past autumn has been so very free from frost until now that the flowers have been uninjured. The plant, which is growing in red loam on a southern slope, is well sheltered by other shrubs.—JOHN GARLAND, *Killerton, Exeter*.

The word "scientist."—In the December number of *Science Gossip* a protest was entered against the use of the word "scientist," and opinions on the point have now been received from some well-known men. The Duke of Argyll,

Sir John Lubbock, Lord Rayleigh, Professor Huxley, and Dr. Albert Günther unreservedly condemn the word. Lord Rayleigh approves Lord Kelvin's proposal to revert to the wider meaning of "naturalist," while Dr. Günther sarcastically suggests that "scientist" might advantageously be reserved to denote the modern dabblers in great scientific questions. Professor Huxley thinks "scientist" must be "about as pleasing as 'electrocution'" to anyone who respects the English language.

\* \* We are pleased this odious and needless word has been disowned by some of our best scientific men. Perhaps they will some day repudiate the very loose way in which the word "science" itself is used by many people.—ED.

**Hypericum patulum.**—Though I have a very great respect for Mr. Archer-Hind's knowledge and judgment of hardy plants, I have never been able to agree with him in his opinion that the *Hypericum patulum* of Sir J. Hooker (*Botanical Magazine*, tab. 5693, and "Flora of British India," vol. i., 254) and of modern gardens is not the *H. patulum* of Thunberg's "Flora Japonica" (295, Icon. 17). Sir J. Hooker tells us that it is "a native of Japan, discovered by Thunberg, and introduced into Kew by Mr. Oldham, collector for the Royal Gardens, who perished of fever on the coast of China." Some years ago I examined Thunberg's portrait of the plant, and made inquiries at the Royal Herbarium whether any doubt was felt there as to the identity of Sir J. Hooker's plant, and was told that there was none. That there has been some confusion in botanical works between *H. uralum*, *H. patulum* and *H. oblongifolium* is evident to anyone who examines the character and synonyms given. De Candolle ("Prodromus," vol. i., p. 545, A.D. 1824) agrees with Thunberg in his description of *H. patulum*, identifying it with *H. uralum* of Don, and also describes another variety of the same species. Even if Sir J. Hooker could have been mistaken in recognising the characters, it is unlikely that a shrub so easily raised from seed, as I have found all this section of *Hypericum* to be, should be unknown in English gardens in spite of our multiplied communication with Japan in horticultural matters.—C. W. DON, *Edge Hall, Malpas*.

**The weather in West Herts.**—The mild weather, which had continued without a break during the previous three weeks, suddenly came to an end on December 29, since which time low temperatures have prevailed. On Saturday in last week the highest reading in shade was 46°, but on Monday and Tuesday the temperature at no time exceeded 34°. On Tuesday night the exposed thermometer showed 14° of frost, which is the lowest reading as yet registered by the same instrument this winter. At the present time the temperature of the soil stands at 39° at 2 feet, and at 35° at 1 foot deep, both readings being very similar to those recorded at the same date last year. Snow fell for the first time during the present winter on Saturday. There was also another fall on Tuesday night, but on neither occasion was there sufficient snow to completely cover the ground. On Saturday the wind reached the strength of a gale, but the velocity for no single hour exceeded thirty-one miles. As in the case of the gale which occurred just a week previously, the strongest gusts came from due west. December proved a very mild winter month. Rain fell on nineteen days, and to the total depth of nearly 2½ inches, or about the average quantity for the month. During the year 1894 thirty inches of rain fell, which is only about half an inch in excess of the mean fall for the previous thirty-eight years.—E. M., *Berkhamsted*.

**The Royal Gardeners' Orphan Fund.**—The executive committee held a meeting at the Hotel Windsor on the 28th ult., Mr. W. Marshall presiding, there being a full attendance. The following special subscriptions were announced: The Altrincham Gardeners' Society, proceeds of an entertainment per Mr. C. Hewett, £50 10s.; the Scottish Horticultural Association, £5; Bris-

tol *Chrysanthemum* Society, sale of flowers, per Mr. J. Vallance, £5 5s.; the Stockport *Chrysanthemum* Society, £2 2s.; the Ware District Gardeners' Mutual Improvement Society, £1 2s.; Mr. J. Rogers, Ware, 5s.; Mr. G. R. Allis, Old Warden Park, Biggleswade, 5s.; and Mrs. Bowerman, Hackwood Park, Basingstoke, 5s. The following sums were from boxes: Mr. J. Burn, Abbey Park, Leicester, £7 5s.; Mr. J. B. Stevenson, Bournemouth, £1 7s. 2d.; Mr. H. A. Burbury, Birmingham, £1 10s.; Mr. J. H. Witty, Nunhead, £1 3s.; Mr. A. J. Brown, Chertsey, 13s. 6d.; Mr. H. Herbst, Kew Road, Surrey, £5 5s.; and Messrs. W. Thomson and Son, Clovenfords, £3 13s. A letter was read from Mr. George Bunyard, Maidstone, resigning his seat on the committee in consequence of inability to attend the meetings. A draft financial statement was furnished by the honorary secretary, which was considered satisfactory. Notice of motion was given to amend the rules at the annual general meeting in one or two particulars. The new applications from candidates desirous of being placed upon the fund were finally considered and approved. The allowances to the orphans for the first quarter in the present year were ordered to be paid. A hearty vote of thanks was passed to the chairman for presiding.

## OBITUARY.

### MR. C. COLLINS.

MANY gardeners and nurserymen will hear with great regret of the sudden death of Mr. C. Collins, a member of the staff of the *Journal of Horticulture*. On Christmas Day Mr. Collins was in his usual health, but it appears he had been warned by a medical man not to over-exert himself as he suffered from heart disease. He died entering a railway carriage at Forest Gate Station on Boxing Day last while carrying one of his children in his arms. Mr. Collins was born at Otterbourne, in Hampshire, and had gained experience in several good gardens, the last place he filled previously to joining the horticultural press being at Howick Castle. He first joined the *Horticultural Times*, then *Amateur Gardening*, then the *Gardeners' Chronicle*, and finally the *Journal of Horticulture*. We have known Mr. Collins for many years, and our sympathy is with his family in their bereavement. He was about thirty years of age, and we understand, insured in small societies. Unfortunately, his death occurred too soon to realise much benefit from one important office. He was a member of the United Horticultural Benefit and Provident Society, but had joined only recently.

## TRADE NOTES.

WE learn that Her Majesty's Commissioners of Woods and Forests have commissioned Messrs. Clibran and Son, of Altrincham, and of the Principality Nurseries, Llandudno Junction, to carry out the planting of Crown lands in Wales. The work is now in progress under the supervision of Mr. T. Lewis, Jr.

## BOOKS RECEIVED.

"Practical Forestry." Second edition. A. D. Webster. Rider and Son, London, E.C.

"Transactions of the Royal Scottish Arboricultural Society."

"Report of Proceedings of Viola Conference at Birmingham, August 3, 1894."

"Glenny's Garden Almanack." Illustrated by I. Ward, Lock, Bowden and Co.

**Erica ramulosa.**—Can any reader tell me in what nursery in England or elsewhere I can obtain this plant.—J. V.

**Names of plants.**—*J. H. Nicholson*,—1, *Cypripedium insigne*, ordinary form; 2, too small to identify.—*Jas. Davidson*,—*Masdevallia Chimera*.—*Danm.*—Specimen too far gone to identify.

No. 1208. SATURDAY, January 12, 1895. Vol. XLVII.

"This is an Art  
Which does mend Nature: change it rather; but  
THE ART ITSELF IS NATURE."—Shakespeare.

## ORCHIDS.

## CATTLEYA PERCIVALIANA.

This is one of the most useful of all Cattleyas, for it flowers always in midwinter. The flowers are somewhat smaller than those of any other species belonging to the labiata group, but to compensate for this they are very brilliant and vary considerably. They appear during the months of December and January, a very serviceable time, for it enables the keeping up of a continuance of blooms after those of *C. labiata* vera are past and before those of *C. Trianae* can be expected to open. Compared with others of this group, *C. Percivaliana* is of comparatively recent introduction, and for this, credit is due to Mr. Sander, of St. Albans, whose collectors first discovered it and sent plants home about twelve years ago. Its natural habitat is in South-west Venezuela, where it is said to grow upon bare rocks fully exposed to the sun's rays at about 4000 feet elevation and mostly in close proximity to the rivers. From this we may gather that this species enjoys a plentiful supply of water during its season of growth. This species has been introduced in considerable quantities since it first became known. I believe amongst this first lot there unfortunately was a large percentage of what may be termed inferior varieties, all of which, however, were well worth growing.

Probably through some want of knowledge as to its treatment in this country the flowers were at one time often found not to open well, and this caused the species to have a bad reputation. During the past few years the blooms have fully developed, and the rich shades on the labellum have materially added to its beauty. This fine species was named in honour of Mr. R. P. Percival, of Birkdale, Southport, who at one time possessed a very fine collection of Orchids. In growth this plant greatly resembles *C. Mossiae*, and has oblong, furrowed pseudo-bulbs, which grow to about a foot in height, and are furnished with solitary oblong leaves of a deep green colour. The flowers are smaller than those of *C. Mossiae* and the smallest in this section, although they individually measure between 4 inches and 5 inches across, and are borne several upon a spike. As is usual with most members of this genus, the flowers of this kind are found to vary considerably in colour and markings. Thus there are to be found some with very pale segments, whilst others are distinguished by their deep colour and yellow markings in the throat. A good typical form may be described as having the sepals and petals of a purplish rose, the latter mostly more deeply coloured and much broader than the former; the side lobes of the lip are of the same shade as the petals, striated with dull orange; the front lobe beautifully frilled and of a rich magenta-crimson, blotched more or less with maroon and streaked with golden yellow; the throat yellow, into which run some purple lines. Amongst the numerous plants which have arrived in this country, there has been introduced a most chaste and beautiful albino variety which, as known in our gardens as *C. Percivaliana alba*. The first plant of the white variety that flowered was in the collection of Mr. Percival in 1884. It has entirely pure

white blooms with the exception of a yellow stain in the throat. This, however, is exceedingly scarce. W. HUGH GOWER.

**Dendrobium nobile** (*T. Marshall*).—There is nothing unusual in having this in flower at this season, for although somewhat early, I have recently seen a quantity in Covent Garden Market. By properly ripening the bulbs and giving them a thorough rest, the plants may be placed in heat and had in bloom by Christmas time, and where a number of plants are grown, a fine succession of flowers is easily obtained by proper treatment. It is impossible to say whether you have a good or bad variety unless you send a bloom.—W. H. G.

**Oncidium ornithorrhynchum**.—This very beautiful and useful plant produces its long spikes of many flowers very freely during the autumn and winter months. These individually are not large, but produced in great quantities. A specimen of the pure white form, which is very scarce, was recently exhibited at a meeting of the Royal Horticultural Society with seventeen grand spikes, which carried nearly 1700 flowers. In the typical plant the flowers are of a clear pale rose and have a sweet fragrance. It is a native of Mexico and Guatemala, and enjoys cool treatment under cultivation. Never allow the plant to become dry at any time, as it requires no decided period of rest.—W. H. G.

**Cypripedium Curtisi** (*T. Marshall*).—This *Cypripedium* was discovered by the collector whose name it bears and sent to Messrs. Veitch, of Chelsea, from Sumatra about twelve years ago. It is similar to *C. ciliolare*, but perfectly distinct, and has been used with some good results in the raising of new hybrids. The flowers are large, the dorsal sepal small, white, heavily veined with green; the petals brownish purple, becoming greenish towards the ends, and deflexed; the large lip of a dull dark purple. Possibly your plant is a hybrid from this kind.—W.

**Cypripedium Spicerianum**.—This is now flowering in many collections, its distinct shape and colour making it very welcome. It first became known to us in 1878 through Mr. H. Spicer, but was soon imported in considerable numbers by various firms from Assam. In growth the plant greatly resembles *C. insigne*, and the flowers vary in their shades of green and brown. The dorsal sepal is nearly entirely white, having only a small portion of the base green, with a very pronounced central line of deep purple. This character is also very prominent in the greenish petals, which are also deeply undulated at the margins. Being of such a distinct character it was eagerly sought after by the hybridiser, and has been used largely with marked success.—G.

**Odontoglossum coronarium**.—This, although it has been grown in our gardens for a number of years, flowers very unsatisfactorily, except in a few collections. It first became known over forty years ago, and is a native of New Grenada, where it grows at a considerable elevation. The blooms, produced upon a many-flowered raceme a foot or more in length, are each over 2 inches across; the sepals and petals of a bright reddish brown, margined with yellow and very shining; the small lip bright yellow. The plants should be placed in the cool house near the roof, and never be allowed to become dry at any season. It is known on the Continent as *O. candelabrum*.—G.

**Wintering Calanthes**.—Being successful in cultivating the very useful, early winter-flowering section of *Calanthes*, I wish to draw attention to an error which is often made with the pseudo-bulbs during the winter or resting season, and that is, subjecting them to too low a temperature, and also placing them in too dark a position. The pseudo-bulbs being leafless, it must not be imagined that they may be stored in out-of-the-way places, almost like Dutch bulbs, as if so, even though they may remain plump, they start away very feebly and are not to be compared with

others which have been rested in a warm temperature. Being fairly well off for house room, I allow them to remain well exposed to the light in the structure where they have been grown and flowered. Some of the pseudo-bulbs are also wintered on a warm and dry shelf near the glass in a lean-to plant stove. The bulbs are also allowed to remain in the pots or baskets as grown. Under this treatment the plants start away strongly, being in this respect quite unlike any which are shaken out of the soil after flowering with the idea of storing in a smaller compass.—A. YOUNG.

**Odontoglossum læve**.—From "W. C. M." comes a bloom of this under the name of *Odontoglossum Schroderianum*, which is a far superior and much rarer kind than *O. læve*. In the flower before me, which measures about 2 inches in diameter, the sepals and petals are light brown, barred with yellow, whilst the small flat lip is rosy lilac. This species is an old inhabitant of our gardens and is a native of Mexico, requiring quite cool treatment. It is one of the least showy kinds in this genus, and it is curious that it should have been imported for *O. Schroderianum*. This is the second occasion during the past month or two that I have seen *O. læve* called *O. Schroderianum*.—W.

**Dendrobium aureum**.—This fine old *Dendrobium*, which is better known in our gardens under the name of *D. heterocarpum*, is now flowering profusely with Messrs. Laing and Sons, of the Forest Hill nurseries, quite small plants being completely covered with bloom. The flowers are produced from the upper nodes of the two and three-year-old stems; therefore the annual pruning of this species should not be attempted. The colour of the sepals and petals is creamy white, and the lip is tawny yellow, streaked with red, and velvety purple on the disc. This is a very desirable plant, the flowers lasting a considerable time in full beauty and emitting a pleasant fragrance.—G.

**Cymbidium Lowianum**.—I am in receipt of a bloom of this fine species from George Ford on an opinion. It can only be described as a pale form; the lip is light red, which is by no means uncommon, and the sepals and petals are quite green. In the best varieties these latter approach deep yellow, and the blotch on the lip is of a deep reddish crimson. It appears to be rather early for this plant to be in bloom, the usual time being about a month hence. I have recently noticed some exceedingly fine examples, but the blooms will not be expanded until February or March. The flowers will last two months and even longer in perfection, and often upwards of thirty are borne upon a spike.—W. G.

**Cypripedium Leeanum superbum**.—A remarkably fine variety of this splendid hybrid is now in flower in Messrs. Laing and Sons' nurseries, Forest Hill. It is the result of crossing *C. insigne* Maulei with *C. Spicerianum*, and is far superior to the ordinary form, which is a hybrid from the typical form of *C. insigne*. During the present season I have noticed a number of seedlings in flower at various establishments from this parentage, and resulting in many varieties, none of which, however, are distinct enough for varietal names. The plant in question has a very fine dorsal sepal, the spots being of nice colour, the whole flower large and of good substance.—W.

## ODONTOGLOSSUM CERVANTESI AND VARIETIES.

**ODONTOGLOSSUM CERVANTESI** is a dwarf-growing species, flowering during the winter months. It is easily grown and therefore very suitable for amateurs. The best way to grow it is to suspend it in shallow pans close to the roof of the cool house. When so placed it succeeds far better than when grown on the stages with other kinds. The potting compost should consist of fibrous peat and Sphagnum Moss, and care must be taken that the drainage is in thorough order, for if allowed to get into bad condition these small-growing

kinds soon dwindle away. When potting the plants raise them well up on a mound-like cone. This pretty little species was introduced into this country in a living state from Mexico by the late Messrs. Loddiges, of Hackney. The pseudo-bulbs are small and furnished with solitary oblong leaves, each about 4 inches or 5 inches in length. The flowers, produced from four to six upon a scape, are each nearly 2 inches in diameter. The petals are much broader than the sepals, both pure white, transversely streaked around the base with broken lines of reddish brown; the lip is broad, with finely undulated margin and pure white.

*O. CERVANTESI DECORUM*.—This magnificent variety of the typical form first appeared, I believe, in the collection of Sir Trevor Lawrence, Bart., at Dorking. In this form the flowers are very much larger and all the segments broader, the broken lines are more numerous and of a deeper shade, whilst the large lip is deeply bi-lobed and finely cut at the margin, the streaks on the disc being of a purplish colour.

*O. CERVANTESI MEMBRANACEUM*.—This charming little kind differs somewhat from the type and was described by Dr. Lindley in 1838. It produces a raceme of several flowers, which are sometimes white and sometimes of a rose colour, with the usual characteristic broken lines on the sepals and petals, which are also produced slightly upon the bluntly cordate lip.

These form a very nice little group, to which should be added *O. Gerstedti*, *O. Krameri*, *O. Rossi* with its varieties, and others, which all succeed well under similar treatment.

WM. HUGH GOWER.

#### SHORT NOTES.—ORCHIDS.

*Cypripedium Youngianum superbum*.—Under this name I recently noticed a very distinct plant in bloom in the Cambridge Lodge collection. It was supposed to be the result of crossing *C. flavigatum* with *C. ciliolare*, and has the dorsal sepal very heavily veined, the deeply coloured drooping petals being very thickly spotted.—W. G.

*Cypripedium callosum sublæve*.—This is a distinct form of this beautiful species, and, according to the late Professor Reichenbach, is a hybrid between *C. callosum* and *C. Hookeri*. The petals are of a fine purplish-rose colour, and the lip is also suffused with rose. A very nice variety is at present in flower at Messrs. Peed and Son's Roupell Park Nurseries, Norwood.—G.

*Cypripedium Boxalliatratum*.—This is one of the finest varieties of this beautiful species. It is a native of the Tongu district, in Moulmein, the individual blooms being large, of good substance, and quite shiny in appearance, as in *C. villosum*. In the variety atratum the dorsal sepal is larger and more heavily blotched with black, whilst the petals are broader and much lighter in colour.—W.

*Masdevallia Gairiana*.—A beautiful hybrid *Masdevallia* of Veitchian origin, obtained by crossing *M. Veitchiana* with *M. Davisii*. It grows to about 4 inches or 5 inches in height and has slightly arching foliage. The colour of the flower is reddish orange, spotted principally upon the upper sepal with mauve-coloured warts. It is a decided addition to this genus, and was first flowered about ten years ago.—W.

*The Dove Orchid* (*Peristeria elata*) (*T. W. O.*).—This is the name of your plant, and it will attain a height of from 3 feet to 4 feet when well grown. The flowers will open about July or August and continue in perfection for two months. The spike grows even higher than the foliage. At the present season this species must be kept quite dry. When growth commences water must be given with care. Place it in the Cattleya house.—G.

*Odontoglossum præstans*. Under this name comes a flower of an *Odontoglossum* from George Woodhouse. This has lanceolate sepals and petals, greenish yellow, tapering sharply at the points, and spotted and blotched with dull brown; the lip and column white, the former having a brown blotch upon the centre and with a pale yellow crest. It is a very nice flower, but I should take it to be a form of *O. gloriosum*.—W.

*Lælia Perrini*.—This fine autumn-flowering kind seldom attains more than 1 foot in height. The flowers

each measure about 6 inches across and are of a pale rosy magenta, with a deep, rich crimson-purple lip. There is also a charming variety of this plant named *L. Perrini nivea*, which flowers at the same season—October to December. In this the sepals and petals are white, as are also the side lobes of the lip, the front lobe being pale rose. It is a beautiful companion to the typical form.—W.

*Odontoglossum crispum* (*Beginner*).—Undoubtedly this is the most useful and most extensively grown *Odontoglossum* in cultivation. It is, however, not advisable to try to hurry this plant into bloom at the present season, for the spikes appear to make up better if produced a little later on, and will then be safer from the fog. This has probably been the cause of your blooms fading so quickly. The pure white form is very chaste and beautiful, but the best and most valuable varieties are those which are spotted and suffused with deep rose.—W.

## TREES AND SHRUBS.

### THE BAMBOO GARDEN.

#### FUTURE POSSIBILITIES.

No one who has realised the great and unexpected successes which have already been attained in the cultivation or acclimatisation of Bamboos can doubt that much more remains to be achieved, and that the possibilities are far from being exhausted. When we consider that both in Asia and in South America there are Bamboos growing at almost incredible altitudes, that among the Andes, for instance, there is one species at least—*Chusquea aristata*—to be found at a height corresponding to the top of Mont Blanc, we are encouraged to believe that enterprise will, in the near future, enrich our gardens with many a new beauty. Then there is the evidence of the tessellation of the leaf veins, to which I have already alluded. For this evidence I do not claim more value than is afforded by the simple fact that no Bamboo without this character has proved thoroughly hardy in this country. It is certain that there are tropical Bamboos with tessellated venation which we could not hope to grow, and therefore the test is an incomplete one. But when we find it combined with a natural habitat of great altitude and in plants surrounded by a non-tropical vegetation, we have good reason to put faith in the hardiness of the species and a warranty for trying to acclimatise it here. It must, however, be remembered that altitudes in tropical climates by no means represent the same temperature that they do in Europe. I am assured that in Madras and Ceylon snow does not fall below 9000 feet above the sea; that in Khasia it does not fall below 7000 feet; in Sikkim below 6000 feet; and that at a height of 5000 feet the vegetation of Tenasserim is sub-tropical. But when all these facts are taken into consideration it is still certain that the Himalayas are full of treasures which we as yet do not possess. Eminent botanists are at the present moment busy with the matter, and when Mr. Gamble's great monograph on Indian Bamboos appears, under the auspices of the Indian Government, a totally new light will be thrown upon the subject.

The exploration of the Andes is a more difficult matter, yet they are rich in species

with tessellated leaves growing at heights from 4000 feet to 15,000 feet above the sea level, and assuredly they should be laid under contribution. The great difficulty will be that the absence of great botanical establishments such as those of India must throw the task of investigation upon private enterprise.

Africa is, so far as is at present known, a less promising field for the collector of hardy Bamboos; but it must be remembered that hitherto the chief authority to which we look is General Munro's "Monograph," which appeared in 1866, when the Dark Continent was still an unexplored fable-land. It is probable that since the European Powers have penetrated its most hidden recesses many botanical secrets, undreamt of in our philosophy of a few years ago, will be revealed.

Whether China and Japan can yield us much more than they have hitherto done is to me doubtful. We possess already no fewer than forty distinct species of hardy Bamboos from that source. Both the Chinese and Japanese are excellent gardeners and cultivators, trained by heredity in the art of adapting and improving plants. From time immemorial they have been engaged in ransacking their native forests and mountains for the enrichment of their pleasure grounds, and it is not likely that such sharp eyes should have passed by any species of conspicuous merit in a genus which, in their view, is the type of all that is most graceful and most poetical in plant life. Moreover, they are essentially practical people, to whom the commercial and utilitarian value of the Bamboo appeals with the chink of dollars. For these reasons I am inclined to think that we shall not get many new varieties from their gardens. To many of these gardens our European collectors have for some years had free access, and have thus had before them a living catalogue of the daintiest and loveliest species, with the result shown by the enumeration given in previous chapters. On the other hand, it must be remembered that the flora of China especially is one of the richest in the world, that our botanists are only now beginning to examine it by the light of Western science, and that therefore it is dangerous to hazard any very definite opinion in regard to it. One of our greatest botanists writes to me: "The flora of North-western China is essentially Himalayan, with a profusion of distinct *Rhododendrons*; why not, then, of hardy Bamboos?"

With a view, then, of calling the attention of our collectors in various parts of the world to the subject, I have drawn up a list of those plants described by Munro which appear to be the most likely to succeed in this country, and to which the numerous expeditions sent out in search of Orchids and other rare plants might, in passing, profitably turn their attention.

I am aware that my list errs on the side of hopefulness. A trial, at any rate, will do no harm, even though some species should be sentenced to death, others to imprisonment in the temperate house; while every new plant flourishing in freedom will be a real treasure gained to our gardens—in every sense a sur-

vival of the fittest. Many of them, no doubt, will only find a congenial home in the warmest nooks of our islands, but some there are which may assuredly settle down comfortably among their Chinese and Japanese cousins in the ordinary English climate.

Here is an index, taken by continents, of some of the species which I should wish to see introduced, together with many others unknown hitherto undescribed. Those marked with an asterisk are to be found in the Kew collection, but none, so far as I know, are as yet in commerce:—

ASIA.

- \**ARUNDINARIA RACEMOSA* (Munro).—Native name Pat-hioo. Tessellated leaves. 5000 feet to 12,000 feet. N.E. Himalayas.
- A. *WRIGHTIANA* (Nees).—Tessellated leaves. Nilghiri Mountains.
- A. *LONGIRAMEA* (Munro).—Tessellated leaves. Hong Kong.
- A. *FLORIBUNDA* (Munro).—Tessellated leaves. Ceylon.
- A. *GRIFFITHIANA* (Munro).—Tessellated leaves. Khasian Hills.
- A. *WALKERIANA* (Munro).—Tessellated leaves. Adam's Peak, Ceylon.
- A. *DEBILIS* (Thwaites).—Habitat 6000 feet to 8000 feet above sea. Ceylon.
- A. *INTERMEDIA* (Munro).—Sikkim. 7000 feet to 8000 feet above sea.
- \*A. *HOOKERIANA* (Munro).—Native name Praong (Hooker). Sikkim. 4000 feet to 6800 feet above sea.
- A. *ARISTATA* (Gamble).—9500 feet to 11,000 feet above sea. N.E. Himalayas. Not described by Munro.
- A. *PRAJNI* (Gamble).—3500 feet to 7800 feet above sea. Naga Hills, Upper Assam. Not described by Munro.
- A. *CALLOSA* (Munro).—Tessellated leaves. "Prickly-jointed Bamboo." Native name Uskong (Hooker). 6000 feet above sea. Khasian Hills.
- A. *HIRSUTA* (Munro).—Tessellated leaves. 6000 feet above sea. Khasian Hills. "Spinous stems" (Hooker).
- A. *MICROPHYLLA* (Munro).—Tessellated leaves. 6000 feet to 10,000 feet above sea. N.E. Himalayas.
- A. *ROLLOANA* (Gamble).—5000 feet to 7000 feet above sea. Naga Hills. Not described by Munro.
- A. *JAUNSARENSIS* (Gamble).—7000 feet to 8000 feet above sea. N.W. Himalayas. Not described by Munro.
- \**THAMNOCALAMUS SPATHIFLORUS* (Munro).—Conspicuously tessellated leaves. 8500 feet to 10,000 feet above sea. Nepal, Sikkim, Bootan. (Note.—Several cultivators have a plant with striated leaves wrongly sent out under this name.)
- PHYLLOSTACHYS STAUNTONI* (Munro).—Tessellated leaves. China.
- BAMBUSA NUTANS* (Wallich).—5000 feet to 7000 feet above sea. Nepal, Silhet, Khasia, Assam, Sikkim. Native name in Sikkim, "Mahlo."
- B. *GRIFFITHIANA* (Munro).—Tessellated leaves. Only once found by Griffith in the extreme north of Burmah, associated with numerous tropical plants. Only in-erred here on account of the tessellation. Probably not hardy.
- B. *CANTORI* (Munro).—Tessellated leaves. China.
- B. *AFUS* (Schultes).—Tessellated leaves. Mount Salak, Java.
- B. *CORNUTA* (Munro).—Tessellated leaves. Java. Native name, "Tring embon."
- B. *RICHEYI* (Munro).—Tessellated leaves. Bombay, below the fall of the Kala Nuddi. Native name, "Choomaree."
- B. *MASTERSII* (Munro).—Tessellated leaves. Assam, Dibronghur. Native name, "Bentibans."
- \**CEPHALOSTACHYUM CAPITATUM* (Munro).—Tessellated leaves. 4000 feet to 5000 feet above sea. Khasia, Sikkim.
- C. *PALLIDUM* (Munro).—India, Mishmee, Burmah, Patkaye. 5000 feet above sea. Native name, "Beteo Bans."

*DINCHLOA TJANKORREH* (Buse).—Inconspicuous tessellation. Philippine Islands, and 4000 feet above sea in Java, Mount Salak.

AFRICA.

- ARUNDINARIA TESSELLATA* (Munro).—Tessellated leaves. 500 feet to 6500 feet above sea. Mount Winterberg, Caffre-land, Mount Katberg. Closely resembling the *Arundinaria macrosperma* of North America.
- NASTUS BORBONICUS* (Kunth).—Tessellated leaves. Alpine, 1000 feet to 3000 feet above sea. Island of Bourbon or Réunion.
- CEPHALOSTACHYUM CHAPELIERI* (Munro).—Tessellated leaves. Madagascar. A climbing stem.

SOUTH AMERICA.

- ARUNDINARIA RADIATA* (Ruprecht).—Tessellated leaves. The forests of Brazil.
- A. *AMPLISSIMA* (Nees).—Brazil. 4000 feet to 5000 feet above sea.
- ARTHROSTYLIUM LONGIFOLIUM* (Munro).—6000 feet above sea. Venezuela.
- A. *SCHOMBURGI* (Munro).—6000 feet above sea. Guiana. Native name, "Curata." Lowest internodes 12 feet to 16 feet long.
- CHUSQUEA ULCIGINOSA* (Philippi).—Tessellated leaves. Chili, Valparaiso.
- C. *ANDINA* (Philippi).—Tessellated leaves. Andes, on the fringe of the perpetual snow.
- C. *CULEOR* (Gay, "Flora Chili").—Tessellated leaves. Chili.
- C. *TESSELLATA* (Munro).—Conspicuously tessellated leaves. Andes of Bogota. ? = *Bambusa disticha*.
- C. *ARISTATA* (Munro).—Conspicuously tessellated leaves. 13,000 feet to 15,000 feet above sea in the Andes, Ecuador, Quito.
- C. *FENDLERI* (Munro).—6000 feet to 12,000 feet above sea. Venezuela, Ecuador.
- C. *DOMBEYANA* (Kunth).—6000 feet above sea. Peru, New Grenada, Bogota, Tolima, Ecuador.
- C. *QUILA* (Kunth).—Tessellated leaves. Chili, Valparaiso, Valdivia, Chiloe.
- C. *SELLOVII* (Ruprecht).—Tessellated leaves. Brazil.
- C. *GAUDICHAUDII* (Kunth).—Tessellated leaves. Rio de Janeiro.
- C. *CAPITULIFLORA* (Trinius).—Tessellated leaves. Brazil, Rio de Janeiro. Native name "Quixiume."
- C. *CAPITATA* (Nees).—Tessellated leaves. Brazil.
- NASTUS BARBATUS* (Ruprecht).—Tessellated leaves. Mountain forests of Brazil.
- GUADUA ANGSTIFOLIA* (Kunth).—Tessellated leaves. 2400 feet above sea. Western slope of Andes, New Grenada, La Paila, Bogota, Ecuador, Peru.
- G. *AMPLEXIFOLIA* (Presl).—Tessellated leaves. 2000 feet above sea. Mexico, Santa Cruz, New Grenada, Venezuela.

**Scotch Laburnum.**—Those who are fond of Laburnum should not fail to plant this, seeing it has many advantages over the common kind. It is much later in coming into bloom, and also bears much longer racemes of flower. The foliage, too, is much larger and more shining. I also find it much freer growing. Many of the trusses of bloom last summer were over a foot in length.—DORSET.

**Osmanthus ilicifolius.**—This dwarf evergreen shrub of Holly-like appearance is one of the most useful of the many good things introduced from Japan by John Gould Veitch more than a quarter of a century ago. It often takes many years before the actual value of an introduction of this kind can be fully estimated; it has been so in this case. This *Osmanthus*, moreover, is coming into favour as a plant for town gardens both for boxes and in the open ground. Having once proved its hardiness, it is no wonder that increased inquiries are being made for it. Its dwarf compact habit makes it preferable to the good old *Mahonia aquifolia*, from the simple fact that it will lift with a good ball of soil; whereas the latter will not. Its lustrous Holly-like leaves do not accumulate the sooty deposits beyond the possibility of cleansing. As a front row plant or for massing it is excellent, making also a good

groundwork to taller things of deciduous character. For planting upon rockwork it is also admirable, taking some few years before it will out-grow its position. I have not tried the dwarf variegated form (*O. ilicifolius variegatus nanus*), a most distinct acquisition, and hardly also beyond a doubt. There are also both a silver and a golden variety, and another with a metallic purple shading on the leaves, a very distinct form.—S.

THE TULIP TREE.

(*LIRIODENDRON TULIPIFERA*.)

THIS is one of the very finest flowering trees that have been brought from North America, numerous as those have been. It is the only species in the genus and is nearly allied to the Magnolias. It is spread widely over the North American continent, reaching in the most suitable localities a height of 140 feet, with a trunk 5 feet to 6 feet in diameter. For English parks and large gardens, more especially in the south, it may be strongly recommended, being of elegant, yet stately growth and carrying an abundant canopy of foliage. The leaves, borne on long petioles, are very distinctly four-lobed, each lobe ending in a rounded point; the terminal part has the appearance of having been cut off. The shape of the leaf is, however, subject to considerable variation. In some forms the four main lobes are again divided; in others the lobes are reduced to two. The flowers are solitary and in size and shape have some resemblance to a Lily—a likeness implied in the name of *Liriodendron*. They are eup-shaped and made up of three sepals, which are reflexed, and six erect petals, which on the outside are greenish yellow, but marked inside with a spot of bright orange. A large tree thickly studded over with bloom has a very striking appearance; the flowers are at their best in June and July. Trees raised from seed do not as a rule flower in this country until they are more than twenty years old. Like its near allies, the Magnolias, the Tulip Tree is impatient of disturbance at the root when once it has become established. It should, in consequence, be planted in its permanent quarters as soon as possible, and whilst in the nursery it should not be allowed to remain more than two seasons without transplanting. In the matter of soil its requirements are similar to others of the Magnoliaceae family—a rich, moist loam, inclining rather to the heavy than the light side. There are two or three variegated forms of this tree in cultivation. In one a large proportion of the leaf is yellow; in the variety *aureo-marginatum* this colour is confined to the margins. In autumn the entire foliage of the tree before it falls turns to a brilliant golden yellow. It is, indeed, one of the finest of our autumn-tinted trees. B.

HOLLIES AND THEIR MUTILATION.

No evergreen tree or shrub suffers so much at this season of the year as the Holly in respect to cutting for Christmas decorations. It is not my purpose to enter into a discussion *pro* or *con* as regards the use of cut Evergreens at such times. It is rather to enter a protest against the wholesale destruction of Holly trees and shrubs, these being cut down and sent to market in immense quantities. It is not everyone, perhaps, who is a lover of shrubs that has an opportunity of inspecting the produce of this kind sent to market. In order to secure a large supply such as one sees in Covent Garden, it is not so much a matter of stumping off young trees or bushes as it is of lopping older ones that have taken years to grow. To see these lopped and backed about in an indiscriminate manner is simply grievous. No landowner should tolerate its being done, neither should those who have the charge of property permit it. As a hardy British Evergreen I do not consider the Holly has an equal, but if the cutting and lopping go on increasing, some districts at least will be deprived of their best examples. It is, on the other hand, possible in most instances

to take shoots here and there in a moderate way without doing any material harm. Unless the view in any particular direction is obstructed, I would never permit a Holly tree to be cut down. It is very rare that one will die a natural death, hence Hollies are all the more valuable. My practice in cutting Holly for nearly twenty years past has been to shorten overhanging branches, so as to admit more light to these underneath. In this way I have worked up a number of shapely plants into the pyramidal form, some with a broad base in proportion to the height, others more tapering, but well furnished to the ground. At first a few larger branches had to be shortened; now it is merely a matter of foreshortening. Some of the tallest of these trees are now nearly 30 feet in height, it not being an easy matter, even with the standard tree pruners, to reach their topmost shoots. I find, however, that now their growth is far more equal than it was, so much so in some instances that they grow naturally as pyramids without any training at all. Holly berries are most abundant this season, both the red and the yellow-fruited forms. I have never noted a prolific crop of berries, however, on Golden Queen or Silver Queen; to cut these in any quantities would be nothing less than barbarous. The inferior variegated forms berry freely. SOUTHON.

**Rhododendron dahuricum.**—The exceptionally mild weather experienced in the south up to the present (the middle of December) is showing its effects already in the flowering of this Rhododendron, which has for a fortnight past been in bloom in the sheltered Rhododendron dell at Kew. Its normal season is, however, in February. It is a native of Siberia, and was introduced into this country about the year 1780. It is a shrub of rather sparse growth, rarely seen in bushy form when old, and attains a height of 5 feet. The leaves are small and of a dark green; in the ordinary form they are deciduous, but in the variety called *atro-virens* they remain on the plant throughout the winter. The flowers, spread out almost flat, each measure  $1\frac{1}{2}$  inches in diameter, the colour being a bright, glowing rosy purple. The early flowering and perfect hardness of the species have led to its being used in hybridisation, one of the most popular and useful of its hybrids being *R. præcox*, raised from it and the Himalayan *R. ciliatum*.

**Olearia Haasti.**—I have been much struck with the appearance of this compact growing and most profuse flowering shrub during the past few seasons. Like *Osmanthus ilicifolius*, it is an increasingly popular plant. Its season of flowering is the latter part of July up to the end of August. Although it is deemed one of the hardiest of its genus and quite safe in most parts of this country, I would prefer to plant it in rather dry and elevated positions. If too moist at the root it is just possible that one of our most severe winters might affect it, it being borne in mind that it is an inhabitant of New Zealand, where this genus is known as the Daisy Trees. At Chiswick there is quite a large bush of this species in a position facing north. Thus far I have not seen it used as a seaside plant, but from its appearance I am most favourably disposed towards it by reason of its close, short-jointed, and sturdy habit—strong recommendations against the sea breezes. Another species, *O. macrodonta*, is recommended on the best authority as being more suitable even than the foregoing for this climate.—G. H. A.

**Mistletoe.**—As a marked contrast to the trouble taken in some places to secure a stock of Mistletoe, a friend was telling me lately that it multiplies so rapidly and easily with him as to be somewhat of a nuisance. Not content with remaining in the park, it found a resting-place some years ago on old espalier Apples, the result being a few nice bushes, which have to be strictly preserved. As an outcome, however, of the first invasion of the Apples, there is such a tendency to spread as to necessitate strict orders to carefully look for and cut out all freshly formed growths in

the bark at each annual winter pruning. I noticed the other day an instance of the self-propagation of the parasite on a Sugar Maple, which may be of interest to your readers, especially as this Aeer is not, I believe, among the list of trees which are usually ranked as Mistletoe trees. The tree in question is a nice specimen from 50 feet to 60 feet in height and with a proportionately well-furnished head, in the top of which five or six large bushes of Mistletoe have for a long time found a resting-place. Within the last two or three seasons—doubtless as a result of an exceptionally good crop of berries—little twigs of the parasite are in evidence all over the tree literally from top to bottom. Given a few years and fairly rapid development, this Maple will during the winter months be an interesting sight, evenly loaded throughout its height and breadth with the green bushes. An impression seems to exist that the presence of Mistletoe in quantity on any tree is highly detrimental. It may be so slightly, but not to any serious extent—not, I mean, shortening the life of the tree. The age and size of both Limes and Thorns that one occasionally sees quite in parts loaded with the parasite prove the contrary.—E. BURRELL, *Claremont*.

#### THE WAX MYRTLES OF THE SEA-COAST OF EASTERN NORTH AMERICA.

Those who have written specially of the plants of the Northern States have referred the common coast Myrica to the *Myrica cerifera* of Linnaeus without even a question as to its being a variety of that species. When the plants are seen growing, however, it is impossible to adopt this view, or admit that the northern and southern plants are varieties of one species. In describing the trees of this genus I shall follow Catesby, Miller and Elliott, and call the southern arborescent plant *Myrica cerifera*, and the northern shrubby plant, which also ranges far to the south, *Myrica carolinensis*.

**MYRICA CERIFERA** is a tree sometimes 40 feet in height, with a tall stem covered with pale smooth bark, and sometimes only a few inches thick, although occasionally more than a foot in diameter, and a narrow head of slender upright branches, which are usually forked towards the extremities. The leaves, which remain on the branches until after the appearance of those of the following year, are from  $2\frac{1}{2}$  inches to 3 inches in length, usually from a quarter of an inch to half an inch in width, and covered with bright golden resinous glands, which are so thick and conspicuous on the young foliage that it appears bright yellow. The leaves have a strong resinous smell, quite unlike the peculiar odour of the northern plant. The fruit is pale blue. It grows in low wet holes in the maritime Pine belt and in deep swamps near the coast under the shade of Red Maples, Cotton Gums, Sweet Gums and Bay trees; and where roads or openings have been made through them this tree may often be seen bending down along the margin of the forest, its long slender stem being unable to hold the head erect unless surrounded by other trees. I have found it near Cape Charles, in Virginia; it is very common on the coast and islands of the south Atlantic States from Cape Fear River south to the Florida keys and on the Gulf coast as far west, at least, as Berwick Bay, and probably farther, although I do not remember to have seen it on the Texas coast; it is said to grow on several of the Antilles, and I have collected it in Bermuda, where it is abundant. There is a form of this species (the variety *pumila* of Michaux) which grows in the Pine barrens of the south Atlantic and Gulf coast region, usually in rather low, slightly moist places not far from the margins of swamps. This is often only a foot high, but otherwise is not distinguishable from the arborescent form except in its narrower, smaller leaves and rather smaller fruit.

**MYRICA CAROLINENSIS** is a low shrub, usually not more than 2 feet or 3 feet high, which often forms broad, dense thickets. The leaves are from

$2\frac{1}{2}$  inches to  $3\frac{1}{2}$  inches long and three-quarters of an inch to  $1\frac{1}{2}$  inches wide. The resinous glands are smaller than those on the leaves of *Myrica cerifera*, and never abundant enough to give the foliage the yellow colour which is so marked in that species. The fruit is more than twice as large as that of *Myrica cerifera* and rather paler, although the colour of the fruit of both these plants varies considerably on different individuals. This is common on the shores of the Great Lakes and near the ocean from Southern Maine to Southern New Jersey, and at the north inhabits dry hilly and sandy shore dunes; south of New Jersey it is rare, although I have seen occasional isolated plants near Wilmington, North Carolina, at Bluffton, South Carolina, and near Mobile, growing in swamps with *Myrica cerifera*, and Dr. Chapman and Mr. Curtiss have collected it at Apalachicola, Florida.

**MYRICA INODORA** is a beautiful little tree with pale bark and dark green very lustrous persistent leaves, the fruit sometimes nearly a quarter of an inch in diameter. It was discovered by William Bartram in a swamp near Mobile, where it still grows, as well as in one or two others in the same region. It has been found near Apalachicola and is comparatively common on the Indian River, in Florida; but, although first described more than a century ago, it is still one of the least known of American trees.—*Garden and Forest*.

#### AUCUBAS.

NOTWITHSTANDING the large number of new varieties introduced from time to time (not so much perhaps of late years as from fifteen to twenty years back), *Aucuba japonica*, more correctly perhaps termed *Aucuba japonica maculata*, still heads the list as a shrubby plant of the first rank. In some districts, it is true, it does not thrive so well as one could wish, but these occurrences are extremely rare so far as I have personally taken notes. As an undergrowth to tall deciduous trees I would not be without this *Aucuba* on any account. For such purposes I consider it one of the best shrubs that can be planted. When the tall deciduous trees have cast their foliage, that of the *Aucuba* shines forth at its best. Some may possibly have failed when planting for this particular purpose where it has not been an easy matter to get anything to thrive. As regards the *Aucuba*, I find it is best to select yearling plants for massing or planting in any quantity in unfavourable positions. By this I mean either cuttings that have been rooted for about twelve months or layers of the same stage. Mine were the latter, the work of layering being done after the annual early winter cleaning out. These make capital dwarf stuff to plant straight away when well rooted, pegging down being practised for a season or two afterwards so as to cover the ground, which has now been done where previously it was well-nigh impossible to get anything to thrive, the large overhanging tree in this instance being an immense Horse Chestnut. Let the shrubs be what they may, deciduous or evergreen, it is in my opinion, from practical observation, far better to depend on quite young plants when grouping or massing has to be performed under the shade of trees, the ground around which is permeated with roots. Some planters may and do, I know, employ larger plants for this purpose, but I am fully persuaded that it is wrong in practice; it may take a less number, but these will of the two be the more expensive. The small ones with a fair attention to watering have a much better chance of succeeding. If it be sloping banks that have to be planted, the same argument still holds good. In the case of *Aucubas* (*i.e.*, the ordinary or common variety) I have noted particularly how easily they may be removed and transplanted at almost any season of the year, except when the young growth is quite tender. As stop-gaps, therefore, this makes it all the more desirable to have a stock of young plants in hand for filling up blank spaces.

G. H. A.



STOVE AND GREENHOUSE.

LILIUM SPECIOSUM IN POTS.

SOME Lilies are grown only to a very limited extent, while, on the hand, what may be regarded as popular species may be met with in almost every garden. To this latter class belong such as *L. Harrisii*, *L. tigrinum* and varieties, *L. umbellatum* or *davuricum*, as well as that figured in the accompanying illustration, *L. speciosum*, which is occasionally met with under the specific name of *laucifolium*. This, either in pots or in the open ground, may under favourable conditions be depended upon to do well. It usually blooms during the latter half of August and well on into September, but, of course, it is in this respect influenced by the season, as, for instance, in 1893, owing to the tropical weather then experienced, we had very few flowers after the middle of August. When in pots, it may if needed be had in bloom about the end of June or early part of July, but in

and the best sent from Japan are more than a month later: indeed, Japanese bulbs in splendid condition reach here up to the end of the second month in the new year. In potting the bulbs thorough drainage must be ensured, and where several are grown together in large pots, it is a very good plan to leave a space of 3 inches or 4 inches to allow of a top-dressing later on as the roots at the base of the flower-stem make their appearance. The bulbs should wherever possible be at such a depth that there is a couple of inches of soil over the top of the bulb, and when potted they may be stood outdoors on a bed of ashes and covered about 3 inches deep with the same material or with cocoanut refuse. This must be removed previous to their starting into growth. When required to flower under glass at the normal season they may be left out of doors till the buds are formed, but if a succession is needed some may be protected by a frame and given a greenhouse temperature as they develop. Good showy masses result when three bulbs are placed in a pot 10 inches in diameter, while

effectually, however, the old soil should be removed as far as the upper part of the bulb, for it will there be completely exhausted by the numerous roots produced from the lower part of the stem. In this way clumps of this Lily may often be kept in good condition for years, provided they receive proper attention. In commencing with imported bulbs a good plan is to obtain one's stock and get them all potted by Christmas. As good bulbs of *L. speciosum* can be obtained at a very cheap rate during the dormant season, it has been taken in hand by some of our market growers, and about July and August good examples of it may be seen hawked about the streets, and it is also a familiar object in the flower shops.

THE VARIETIES

of *L. speciosum*, if one may judge by some lists, are many, yet at the same time it must be borne in mind that names are more numerous than distinct forms, while dealers are by no means at one accord in this matter. Of those with white flowers there are four distinct kinds, viz., album, as grown by the Dutch, but which, as far as I know, does not occur among the Japanese importations. The bulbs of album are, as a rule, the darkest coloured of all, while the leaves are also of a very deep green, and the stems, leaf-stalks, and exterior of the buds tinged with chocolate. The interior of the flower is, however, pure white, though after it has been open for a day or two there is sometimes just a suspicion of pink. The variety *Kratzeri*, which is the one white imported in quantity from Japan, differs in many well-marked features from the preceding. The bulbs of *Kratzeri* are yellowish, while the leaves are of a paler green than those of the others. The petals reflex in a very symmetrical manner, and the interior of the flower is not entirely white, as a greenish stripe, which commences in the centre of the bloom, extends about half-way down the centre of each petal. The anthers of this are brown, and conspicuous against the rest of the flower. A second Japanese form is a very scarce one, and only crops up occasionally among importations of *Kratzeri*, from which it principally differs in the anthers being bright yellow. The petals are thick and massive and the flowers large, it being altogether a very desirable form. This variety is generally known under the name of album novum. The last of the white flowers to mention is a crested form of album. In this the stems are usually more or less fasciated, and the flowers disposed in a crowded cluster at the top. The individual blooms are, however, small and of a poor shape, so that it is by no means desirable. Flowers with the petals more or less coloured are very numerous, the best of all being that usually met with in nurserymen's catalogues under the name of *Melpomene*. It was at one time very scarce, but great numbers are now sent here from Japan every year, either separately or mixed with a good form of the variety *rubrum*. All those bearing the varietal name of *Melpomene* are by no means of equal merit, but the best form is characterised by very broad leaves, especially towards the upper part of the stem, and by dark, richly coloured blossoms, whose petals are clearly edged with white. The flowers of this are particularly symmetrical in shape. In all stages of growth this can be



*Lilium speciosum* on terrace. Engraved from a photograph sent by Mr. S. Hore, Hatt, R.S.O., Cornwall.

most instances it is more useful when it blooms at its usual time, forming as it does a link between many summer-flowering plants which are then on the wane and the first of the *Chrysanthemums*. In growing this Lily in pots a good deal will, of course, depend upon the purpose for which the plants are required, as in some cases, particularly if they have to be dropped into ornamental pots or vases as they come into bloom, the bulbs will often need to be potted singly; whereas for the embellishment of conservatories and such like several bulbs in a large pot yield the best results. A suitable compost for potting is good turfy loam, lightened somewhat by an admixture of leaf-mould and well-decayed manure, with a liberal sprinkling of sand. For single bulbs pots 5 inches in diameter (that is the regulation 48-sized pot of the market growers) will suffice, but for others pots 6 inches or even 7 inches across will be needed. Bulbs of *L. speciosum* are sent to this country in large numbers when dormant; hence, though it is important to pot them as soon as possible, it should be borne in mind that those from Holland do not, as a reach here till October is well advanced,

larger clumps can be formed by an increased size of pot and a greater number of bulbs. When out of doors during the summer no great amount of attention is needed, but the soil must not be allowed to get too dry at any time; while, on the other hand, an excess of moisture must be avoided. A good deal of trouble is saved by plunging them to the rim of the pot in cocoanut refuse. When out of doors insect pests rarely trouble this Lily, though occasionally a few aphides make their appearance; but under glass they are sometimes more numerous, and a black fly is also troublesome. When the pots get full of roots a mixture of weak liquid manure and soot water will be of service, as it tends not only to encourage the flower buds, but also to retain the foliage in good condition. When this Lily is grown in pots a good time to repot is soon after the flower-stems decay, for it will be found that the stout roots at the base of the bulb commence growing with great freedom soon after flowering is over. They may be shifted on into larger pots as needed, but where the pots are already large enough and the soil and basal roots in good condition, a top dressing is all that is required. To do this

picked out, for not only are the leaves very broad, but the stems, leaf-stalks and flower-buds are all of a deep chocolate tint. Single bulbs of this variety are more liable to produce two or three shoots than the others are. Though considerable numbers of *Melponene* come here from Japan, there is a second form which is even more numerous. This is usually disposed of under the varietal name of *rubrum*, and represents a form much superior to that sent to this country under the same name by the Dutch cultivators, added to which many of the Japanese bulbs are of enormous size. The confusion that exists in the nomenclature of these coloured varieties is to be accounted for to a certain extent by the fact that the different forms merge into each other by almost imperceptible gradations; hence it has been suggested to bestow the varietal name of *rubrum* upon that form in which the stems and outside of the buds are brownish, and classify those with green stems under the head of *roseum*. This is impossible, as many are about midway between the two, and in some instances the flowers borne by the dark-stemmed forms are paler than those of the green ones. The fasciated form of *rubrum* usually known as *monstruosum* is altogether a poor plant. A distinct variety is *punctatum*, less vigorous than the others, the flowers of which are white, dotted with pink. The blooms of this, especially when in the open ground, often fail to open in a satisfactory manner.

H. P.

**Wintering Caladiums.**—I quite agree with "W. J. M." (p. 522) as to a good amount of heat being essential to wintering Caladiums. I think, generally speaking, that there is a mistaken impression as to heat causing dry rot. During the past nine years I have wintered very successfully a good collection of the best varieties without a failure. I stand the pots containing the bulbs on a shelf in a plant stove, and, this being a lean-to, the position is very dry and warm. I believe that there are more failures from wintering in too low a temperature than from any other cause. No water is needed to keep the bulbs plump.—A. Young.

**Three good winter-blooming zonals.**—The best winter-blooming *Pelargonium* is undoubtedly the popular *Raspail* and its improved varieties. It blooms freely, and the colour is just what is needed in the depth of winter. Excellent companions to it are *Mme. Thibaut* and *Guillon Mangilli*. The former affords an excellent contrast in colour, is remarkably free-blooming, and is, indeed, one of the best all-round zonals we have. Well-grown plants in 6-inch pots will furnish a lot of bloom during winter and early spring. *Guillon Mangilli*, quite an old kind, suddenly came to the front a few years ago, but even now it hardly gets so much attention as it deserves. The flowers are very rich in colour, and the trusses come very large on strong specimens. This is the best zonal I have ever had to do with, as it will expand its blooms fairly well in the depth of winter, even in a cool house where no more fire heat is used than will exclude frost.—J. C. B.

**Rivina humilis.**—This *Rivina* is in no way remarkable for foliage or flower, but the little bright red berries which succeed the blossoms render it very attractive when in the fruiting stage. It is a slender growing subject, not at all difficult to cultivate, and may be either grown in pots or planted out. For convenience of grouping it is generally grown in pots, sometimes singly or at others three in a pot. If this latter method is followed, and pots 6 inches or 7 inches in diameter are employed, handsome little specimens may be obtained, and when laden with their drooping racemes of brightly coloured berries they are really charming. Planted out, this *Rivina* will acquire a rambling habit of growth, and soon

cover a considerable space. It is not a particularly vigorous rooting subject; hence a depth of soil of about a foot will be sufficient. Good drainage must be secured, and a compost consisting of equal parts of loam and leaf-mould, with a liberal amount of sand, will suit it well. During the summer this *Rivina* forms a pretty object in the greenhouse, but to be seen at its best during autumn and winter it needs the temperature of an intermediate house or the cool end of the stove. Seeds afford a ready means of increase, as young plants can be raised in quantity in this way. There are two or three kinds, a looser growing kind with yellow berries (*flava*) yielding a pleasing variety.—H. P.

#### WINTER-BLOOMING BEGONIAS.

THESE are charming for the warm conservatory. A group of *insignis* is very light and elegant, and the flowers are fairly lasting and far more effective than the fashionable tuberous varieties with the heavy cumbersome flowers. Size is not everything; lightness and grace will ultimately find their true place. Then these small-flowered *Begonias* are so easily grown. They make plenty of cuttings, which strike freely in heat in spring, and with fairly good warm frame culture till the end of June they may be grown in nice little specimens in 6-inch pots. If larger specimens are required, three plants in an 8-inch or 9-inch pot will produce them, or cut-down plants may be potted on a second year, but in a general way after the stock of cuttings has been secured, the old plants may be planted out in the borders. Those who have never tried these small-flowered *Begonias* in a sheltered place outside will wonder why they have been neglected so long. Give such kinds as *insignis* and the various forms of *semperlorens*, *nitida*, *Ingrami*, *fuchsoides*, *ascotensis*, and *Carrieri* a sheltered, well-drained site, and they will make charming masses in summer and early autumn; and if before frost comes they are lifted carefully, they may be useful in the warm conservatory during a good part of the winter. It is a good plan to strike the cuttings as early in February as possible, and not to crowd too many cuttings into a pot. Single cuttings in 2½-inch pots would be best, as then there is no disturbance of the roots. The little plants when well rooted are simply lifted out of the propagating bed, and when hardened a little are shifted on as they require more root room. By this means every facility is given to the bottom eyes to shoot out, and consequently the plants get well furnished at the bottom, which is not always the case when many cuttings are crowded into a pot. If the plants are intended for the open air, grow on till the end of May and then harden off and plant out in the second week in June. *B. weltoniensis* is a well-known cottage window plant, and it also makes a pretty group in the open air. This is a tuberous variety, though distinct in character from the large-flowered type. E. H.

#### LIBONIA FLORIBUNDA.

It is now over thirty years since this *Libonia* was introduced from Brazil, and soon after that time it became very popular indeed. I should think it was more generally grown twenty years ago than it is at the present day, though it certainly is not superseded by any newer introductions. Where a display of bloom (and that of as varied a nature as possible) has to be kept up throughout the winter, this *Libonia* readily lends itself for the purpose, for with attention it will bloom for months together, and that, too, during the dullest period of the year. To have plants for blooming in the winter different means are resorted to, for by some cultivators they are planted out as *Bouvardias* at times and lifted in the autumn. This treatment is, however, in a general way hardly to be recommended for the *Libonia*, as with the check of lifting, the foliage is apt to acquire a yellowish tinge, which it will frequently retain throughout the rest of the season. To ob-

tain good flowering specimens the stock plants intended for propagating from should, quite early in the year, be placed in the temperature of an intermediate house, and when the shoots then produced are long enough, they should be taken off as cuttings. The cuttings do not take long to root, and if the plants are grown on freely, using a mixture of loam, manure and leaf-mould, they will about the beginning of June be fit for shifting into pots 6 inches in diameter in which they are to flower. When established in these pots they are better outside, but care must be taken that they do not suffer from want of water, otherwise the foliage will soon get yellow. As the pots get full of roots additional stimulants, in the shape of liquid manure, will be of service, and weak soot water will also tend to keep the foliage in good condition. Grown in this way, plants of this *Libonia* will in a warm greenhouse be objects of beauty for a long time, their bright scarlet and yellow blossoms being very conspicuous among their associates. One frequently hears of many greenhouse flowering plants refusing to bloom in a satisfactory manner during the winter, most of which is, I think, owing to the elastic way in which the term "greenhouse" is applied, for by some the word "greenhouse" indicates a structure from which frost is just excluded and nothing more; whereas for flowering plants a gentle heat is at all times necessary, say a minimum temperature of 50°. A plant well worth growing with this *Libonia* is *Sericographis Ghiesbreghtiana*, now included in that comprehensive genus *Jacobinia*. The deep scarlet flowers of this *Sericographis* in conjunction with its dark green foliage form a very attractive feature. H. P.

**Anthuriums.**—Although not numerous at this season, the richly coloured blossoms of a few *Anthuriums* form a showy mid-winter feature in the stove, their value in this respect being still further enhanced by the length of time they remain fresh and bright. The most noticeable of all just now is a vivid coloured form of *A. Andreanum*, by no means of good habit. The various hybrids, in the production of which *A. Andreanum* has played a part, also flower more or less in the winter, and their paler tints afford a pleasing variety to the richly coloured flowers of *A. Andreanum*. The first of these hybrids to which attention was particularly directed is *A. ferriense*, raised between *A. Andreanum* and the white-flowered *A. ornatum*. Since then a very large number of varieties has been put into commerce, but many of them greatly resemble each other. *A. ferriense* has the flowers of a bright rosy carmine colour, while varieties with salmon-coloured spathes are also represented among these numerous hybrids. The stout leathery leaves of these hybrids of the *A. ferriense* type render them very ornamental from a foliage point of view alone. Raising seedlings of these *Anthuriums* is very easily carried out, and is a source of considerable interest. *A. Scherzerianum*, too, must be recognised at this season, for though there is at present not a great wealth of blossoms, yet their bright colour renders them very conspicuous.—T.

**Wintering Cannas.**—Some of the newer race of *Cannas*, more particularly those with yellow blossoms dotted with red, do not produce very stout rhizomes, and if kept too dry during the winter they are very apt to perish. Within the last few years large quantities of *Cannas* have been distributed by our nurserymen during the winter months, as when dormant they can be readily sent through the post. On receipt they should be at once potted and placed under conditions favourable to growth, for if the rhizomes are bruised or injured in any way they are very apt to decay if kept out of the soil, but when potted, roots are quickly produced and decay is at once arrested. Those that are established in pots will keep well in a greenhouse and with the soil in a slightly moist condition. With a little additional heat, however, *Cannas* may be had in flower nearly all the year round, and as an illustration of their early flower-

ing qualities it may be mentioned that the variety Alphonse Bouvier, which received an award of merit three years ago, was so honoured on January 12, so that the plants then shown could not have passed the winter in a dormant condition. Where it is intended to cut up a number of rhizomes for propagating, this is best carried out just previous to potting, as if done and the rhizomes allowed to remain out of the soil decay is very apt to set in, commencing from the cut portion. The first roots and the most vigorous ones are produced from the upper part of the rhizome just below the spot from whence the leaves are pushed forth.—H. P.

ABUTILONS.

THERE are many varieties of Abutilon with yellow blossoms, but of all of them I prefer Golden Queen, a free-growing, free-blooming variety with rather long flowers of a beautiful golden yellow. It is a first-rate subject for winter blooming, for where flowers have to be supplied at all seasons some of the Abutilons are well-nigh indispensable. As this variety is one of the best in its colour, so the old white Boule de Neige still stands out as unsurpassed among flowers of that tint. Boule de Neige has been grown in our gardens for many years, but I am unacquainted with its origin or early history. By the intercrossing of this variety and the brick-red Darwini, the numerous forms that we have now in cultivation originated. Of reds there are many varieties, and Royal Scarlet, Firefly, and Scarlet Gem are all good. Among those of a pink, rose, or light purple shade, such as King of Roses, Anna Crozy, and The Premier may be mentioned; while among striped flowers we have Abutilon striatum and the large bold-growing A. venosum. A few years ago two very dwarf varieties were put into commerce, but they were never much grown. They were roseum compactum and Vivid compactum, both in their way very pretty. Of variegated-foliaged forms there are several, some of which are largely used for bedding out during the summer. Chief among these are Thompsoni, whose leaves are mottled with a creamy tint; Darwini tessellatum, with yellow variegation, the arrangement of which is well expressed by the varietal name of tessellatum; navium marmoratum, a free-growing form whose leaves are marbled with cream and light green; Souvenir du Bonn, deeply lobed leaves after the manner of A. striatum. They are all broadly margined with white. Another newer form which is of Continental origin is a good deal in the way of the last-named, but the edging of white, or rather creamy white, is very much deeper; so much so, indeed, that in many of the leaves the central green portion is but a small part of the leaf. The slender rambling growing A. vexillarium is also represented by a variegated-leaved variety, but when growing strongly this is very liable to revert to the ordinary green-leaved form. The last to mention of these variegated Abutilons is A. Sellowianum variegatum, whose large, almost horizontally disposed leaves are marked with a couple of tints of green and pale yellow in varying proportions. One double-flowered form is in cultivation, viz., A. Thompsoni flore-pleno, but it is to my mind less pleasing than the single-flowered forms; still it is by some grown for the sake of variety. Given a warm greenhouse during the winter, flowers of Abutilons may be had nearly throughout the year, for in the summer young plants in pots 5 inches or 6 inches in diameter will flower freely, while older specimens if planted in the open ground will bloom for a lengthened period. As wall or pillar plants many of the Abutilons are very suitable, the more vigorous forms, such as A. venosum, being best for lofty structures, while most of the garden varieties will furnish pillars or walls of medium height. A vexillarium, whose small brightly-coloured blossoms are supported in a drooping manner by long footstalks, displays its prominent characteristics when trained to a conservatory or greenhouse roof, and out of doors at Kew this species has, strange to say, passed through

several winters on a low wall in front of one of the stoves.

All the species and varieties of Abutilon are readily propagated by means of cuttings, which strike root very quickly, but where time and space are at disposal, the raising of seedlings is an interesting occupation, for they all hybridise readily, and some very curious forms may be obtained. The distinct A. insigne, with its striking crimson blossoms, might (in conjunction with the garden varieties and some of the most distinct species) yield very interesting results. T.

ORCHARD AND FRUIT GARDEN,

SWEET CHERRIES.

FULLY grown, perfectly ripened, sweet or dessert Cherries are, comparatively speaking, a rarity. Morello Cherries are plentiful enough in their season, and what is the reason the sweeter varieties are not equally so? The reply, if given generally, would in most cases be because the birds prevent any from being profitably grown in the open in all but well-tended orchards,



The Black Heart Cherry. Engraved for THE GARDEN from a photograph by Mr. Norman Blake, Bedford.

while the amount of fish-netting necessary for protecting fruit on the wall trees renders their culture more expensive than desirable. Where wall space is somewhat limited, I can understand why sweet Cherries find no place, or are only grown in very limited numbers, but in the larger gardens neither this excuse nor that of undue expense holds good. Those few who do succeed well with choice Cherries do not make the very common mistake of sticking in a tree here and there among Plum, Peach, and other trees, but devote a good length of wall wholly to them. In very hot and dry positions the trees are particularly liable to be overrun by black aphid, while the fruit fails to attain its full size and richness of flavour during dry, hot seasons, and the sunniest walls are, therefore, more profitably devoted to Peaches, Nectarines, and Apricots. Walls facing in either easterly or westerly directions are most to be preferred, and if any are grown against colder walls or with the Morellos, the fruit produced will be more remarkable for lateness and acidity than for any good quality. The May Duke, which I suppose must be included among sweet Cherries,

is, perhaps, an exception to the latter rule, very acceptable crops being had from trees against cool walls. Instead of dotting a few Cherry trees among other kinds of fruit trees, group them at one end, or, if it can be afforded, let them have a short length of wall, this in either case admitting of their being effectively netted, as they must be, directly colouring of fruit commences, or the birds will soon clear the trees. As before hinted, it is next to useless to plant a few single trees in the open, especially where blackbirds and starlings abound, unless they can be netted over, a by no means difficult undertaking when pyramids or bushes are planted in rows alongside walks. The bulk, or probably the whole of the fruit sent to the markets is grown on standards in orchards, and principally in Kent and Hertfordshire. Some seasons they pay remarkably well, but the fruit is very liable to crack wholesale on the trees, so that Cherry growing must be regarded as a lottery. In each and every case the finest trees and best produce are to be seen on the deep calcareous, loamy soils and in moderately high positions. If, therefore, these conditions are observed in private gardens generally, to the extent even of largely substituting fresh strong loam with mortar rubbish and sharp sand or road grit freely mixed with it for the ordinary garden soil, there is no good reason why failures should occur.

The choice of suitable varieties is not so limited as might appear to anyone who took particular note of what are grown in the various gardens in which Cherry trees find a place. Authorities divide them into sections or races. Thus there are Geans red and black, Black Hearts and Red Hearts, or Bigarreus, and Griottes black and red. The Geans are rigid and spreading in habit, and have long thin leaves, while the fruit is obtuse, heart-shaped. Of the black varieties, Black Eagle and Early Rivers are perhaps the best, Frogmore Early being preferred of the red fruited forms. The Heart or heart-shaped section comprises several very excellent and popular varieties. The trees are of much the same habit of growth as the Geans, and a good selection would consist of Black Tartarian, Late Black, Elton, Bigarreau Napoleon, and Governor Wood, with Florence for a late crop of fine, if not particularly richly-flavoured fruit. The Griottes comprise the popular May Duke and Late Duke, Reine Hortense being also a worthy member of the same family. The trees in these cases are of stiff, upright habit of growth and have large and broad leaves, while the crop is usually very heavy. From the foregoing the following six might be selected, and are given in their order of ripening: Early Rivers, Governor Wood, Black Tartarian (Bedford Prolific, a good substitute), May Duke, Bigarreau Napoleon, and Florence.

For walls, fan-shaped trees are most to be preferred, though stiff-growing Cherries succeed well under either horizontal training or a modification of the two systems, fan-shaped trees having their branches gradually brought to a horizontal position. The stronger growing varieties, or the Hearts and Bigarreus, should be allowed good room to grow, much-restricted trees forming far too much breast-wood to be productive. These, then, should be planted not less than 24 feet apart, and if the walls are 12 feet and upwards in height, so much the better. May Duke and varieties of similar habit of growth may be planted 18 feet apart. Cordons, though sometimes recommended, require to be frequently root-pruned in order to check exuberant growth, and they then succeed fairly well. These, if single, ought to be worked on the

dwarfing or Mahaleb stock, and if single branched be planted 18 inches apart, two or three branched trees having a width of 15 inches to 18 inches allowed for each branch. These may be trained either vertically or obliquely, the latter method giving the greatest length of branch and the lower parts of the tree get a greater share of the sap than is the case with the upright trees. Horizontally or espalier-trained trees are not often seen in the open, but they succeed well trained in that way and can be readily netted over. Very handsome pyramids as well as bushes can be formed, and these often crop surprisingly well. For these, again, the Mahaleb stock is to be preferred, and the distances apart may vary from 9 feet for the May Duke family and 12 feet for the stronger growers generally.

A certain amount of rather hard pruning will always be necessary for a time, or till a good foundation is laid, but afterwards the leading shoots should be reserved to their full length. The more they are pruned the more strong wood growth is formed; whereas shoots left to their entire length will flower sparingly perhaps the next season and be wreathed in flower the second spring following, a cluster of fruit-buds invariably forming at the same joints in after years. All superfluous summer growths ought to be early stopped at the fifth or sixth joint and the break from these at the first joint. Then if shortened to 1 inch in length at the winter pruning the fruit-buds at the base will open strongly and be followed by clusters of fruit, the foundation of what may be termed a good permanent fruiting spur being laid. When this method of pruning does not answer well, owing, it may be, to the trees not having sufficient head-room, they ought to be treated similarly to Morellos or Peaches, a moderate number of young shoots being laid in during the summer and reserved to their full length at the winter pruning, all flowering with moderate freedom the following summer. This necessitates cutting out each winter much of the wood that has only fruited once, while root-pruning should be frequently practised when necessary to check a too vigorous growth.

Cherries very rarely escape an attack of black aphid, but early summer pruning or stopping, followed by forcible syringings with first a decoction of soft soap and quassia chips and then clear water, will usually get rid of this pest. Without being particularly tender, Cherry blossom is yet frequently damaged by frosts; hence the wisdom of covering or protecting with doubled fish-nets hung loosely over them. Thus treated nearly every flower is followed by a fruit, and in many cases the set of fruit is heavier than should be left to ripen. Thinned out with moderate freedom, all those reserved will attain their full size and be richly flavoured, but when all are left hanging some will fail to ripen and the rest be of poor quality. Cherries should be fully ripe before they are gathered—that is, if their full flavour and richness are desired. It is true keeping them thus long may mean the loss of a considerable number from cracking, this taking place in showery weather or when the atmosphere is highly charged with moisture. Both May Duke and Black Tartarian hang well after they are ripe, and a good dish of the latter has great weight in a collection of fruit in August.

Cherries can be grown remarkably well under glass, and bushes, either planted out or in pots, present a most attractive appearance when the fruit is ripe. The wonder is so few houses have been put up for them. Hard forcing should not be attempted, but they could yet be had by gentle forcing ready for use late in April, a good selection of varieties keeping up the supply till

late in June. If kept in pots the house could be cleared in time for a good late crop of Tomatoes to be had, the rest for the trees outside being most desirable. W. I.

**Peach Dymond.**—I can fully corroborate what "G. W. S." says at page 482 respecting this fine Peach. It has not only size, colour and flavour to recommend it, but a very hardy, free-bearing constitution. It is a good open-air Peach and does well in that position in this garden, ripening in good time in August. It keeps longer after being gathered than many sorts and travels well. It may not be generally known that Dymond is a capital forer, ripening as soon as Stirling Castle, and no doubt would succeed equally as well in later houses. Mr. Coleman, of Eastnor, once told me that if he were confined to one Peach and one Nectarine for tub work he would choose Dymond and Stanwick Elruge.—J. CRAWFORD.

—This Peach is recommended at page 539 by "W. G. C." for early forcing. I have had it in quantity early in June, and this season I hope to have it quite a month earlier. It is a very valuable Peach either indoors or on walls. Even this last summer I gathered fine fruits at the end of August from young trees planted the previous November. I do not know of a freer growing variety, and when forced it sets very freely. The summer of 1893 was a grand one for Peaches, and I find I gathered Dymond on August 10 from open walls without protection of any kind.—W. S.

**Flavour in Pears.**—With me Doyenné du Comice from pyramid trees was much richer in flavour than the larger fruits from cordons, but these latter were allowed to hang longer before being gathered so as to lengthen the supply. I attribute the difference to the extra time of hanging, as I know by experience that mid-season Pears are depreciated in quality if left hanging too long. This is especially noticeable with Louise Bonne de Jersey and also the earlier Beurré d'Amanlis. Some varieties of Pears are very much influenced by soil and situation. The best Duchesse d'Angoulême that I ever tasted was gathered from a tree growing at Conway, in North Wales. The finest flavoured Beurré Superfin I have tasted this season came from the late Dr. Roden's garden at Kidderminster.—Y. A. H.

**Peach Crimson Galande.**—I was pleased to see "W. G. C.'s" remarks on this Peach at p. 535, as I have found it excellent in every way and very useful for forcing. This variety is well adapted for early work. Where very hard forcing is carried on I would prefer Early York, Early Grosse Mignonne, Hale's Early or similar varieties. I have found Crimson Galande most serviceable for dessert from about the middle of June. The flavour is good and the fruits when well fed attain a large size and are beautifully coloured. Being a freestone adds to its other good qualities. The growth is vigorous, and it does grandly on a warm soil in the open. The flowers are small, but they set freely. My experience with this variety when hard forced is that it requires more air when in bloom than some of the kinds. This may not generally be the case with trees in modern houses.—S. H. B.

**Apples in poor soil.**—With regard to dessert kinds I have found King of the Pippins rarely fail in any soil or locality, and though by some growers it is considered of second-rate quality, I do not class it as such, as, taking all points into consideration, it is excellent in every way, a great and certain cropper, and I have never known trees to fail in any soil or locality where they had a little care at the start. This variety I put at the top of my list of dessert kinds for poor soil. Kerry Pippin is another old variety that rarely fails to crop in any soil, and where early Apples are required it is valuable. The well-known Blenheim Orange is not fastidious as to soil when the tree has attained a fair age. I admit in a young state it is a shy bearer, but when older it fruits grandly as a standard and in most localities.

Yellow Ingestre is a great cropper and rarely fails. Baumann's Red Reinette is likewise good, though fruit very handsome and keeping well. Among the cooking varieties there is a wider selection. The Keswick Codlin rarely fails. To this should be added Manks Codlin and Lord Grosvenor. Cellini is a certain bearer in light soils, but not suitable for wet or clay land. Lane's Prince Albert is a grand Apple and not particular as to soil or locality. Lord Derby, Annie Elizabeth, Golden Noble and Waltham Abbey Seedling are all suited for light soils. Alfriston always does well, young trees producing very fine fruits, which keep well into the spring. The above is a select list of varieties that I have found to do well in poor soil with no special treatment.—G. WYTHES.

**New Apple Armorel.**—This is a valuable addition to the list of late dessert Apples. Armorel is a good variety to follow Cox's Orange Pippin. It may be had in good condition well into May. It is on account of its lateness that I send this note, as though we have Apples in great variety, we have only a few really good late dessert kinds at the time noted above. I saw this variety doing well in bush form last summer, very small trees cropping freely. It was raised by Mr. Ross, of Welford Park, who thinks it one of his best seedlings, and it has received the highest award of the Royal Horticultural Society.—G. W.

#### THE FUTURE OF HARDY FRUIT CULTURE.\*

IN face of the agricultural depression and the problem of how to make the land pay, we may take a glimpse of what the prospects of hardy fruit growing for profit are likely to be in the future. The Apple is acknowledged to be the king of British fruits, and has received more attention in consequence than any other kind. Plums and Pears are perhaps next to Apples in importance, but unless the soil and situation are very favourable, I would not plant Pears, as they are too uncertain and more liable to injury from climatic changes. My experience is that both Apples and Plums are far more profitable planted and grown under the same conditions. In bush fruits and Strawberries we find the acreage increasing rapidly, and probably the number of varieties of each kind will be reduced in the future, as there are only a few sorts of each that will give handsome returns. Take Gooseberries as a case in point. We are forced to rely on such varieties as Whinham's Industry and Keepsake for early picking. Immense quantities of trees have been planted of late years on a system that is neither the most profitable nor best. If we must compete successfully with the foreigner in the future we must alter our methods, not only in the form of trees, but also in the selection of varieties, grading, insect destroying, manuring, pruning, and last, but by no means least, given an equal chance with the foreigner in railway rates.

#### FORM OF TREES.

It is high time that fruit growers should abandon the standard and only plant dwarf trees, which can be pruned, sprayed with reliable insecticides, and the fruit gathered from the ground. Instead of waiting twelve or fourteen years a profitable crop may be reasonably looked for the second year after planting dwarf trees, and, being low, they are not exposed to gales, with their disastrous effects to the fruit, and the branches are not broken by ladders, as in standards. These are a few of the advantages of the dwarf form of tree, and when such are fully recognised by planters I believe it will be the tree of the future.

\* Paper read by Mr. S. T. Wright, Glewston Court Gardens, at the Hereford fruit conference, November 15, 1894.

## GRADING THE FRUIT.

Of all things connected with fruit culture, I question if anything reflects so much discredit on the home grower as the way in which our fruit is consigned to market. To prove this it is only necessary to visit any of our chief markets in the season and note the slovenly way in which Apples are placed in baskets or other packages. It is very seldom that any care is exercised in the grading; large and small are bundled together until the basket is nearly filled; it is then topped up with some of the finest fruit and put on the market. This is a grave scandal, as it is not honest, and is a deliberate attempt to deceive the purchaser, bringing general discredit on the English fruit grower. I had a strong proof of this in Edinburgh at the time of the International Horticultural Exhibition there in 1891: fruiterers there declined to buy English Apples because of what they justly termed "rascally packing." If we must meet the foreigner on equal terms in our markets, it is essential that we grade and pack our fruit as well, if not better than he does, and until this is done he will always have a large share in our business. At nearly all these fruit conferences great stress is laid upon the point of improved modes of packing, but so far little good appears to have resulted from the advice given. The comparatively few who do pack their Apples, &c., well can testify in emphatic terms how much they gain by their care and honesty. Every grower of fruit in bulk acquires a reputation in the market, and what that reputation depends entirely upon the man himself.

## INSECT DESTRUCTION.

As a body we are miles, as it were, behind our American and Canadian cousins in dealing with insect foes, and if we are to hold our own in the future, increased vigilance and attention to this matter will be a necessity. If the Hop growers of this country were to neglect the spraying and washing processes requisite to keep the plants clean, in the majority of instances the Hops would be conspicuous by their absence, and if this is true about Hops, it is equally important about fruit trees. Unfortunately, I have had some extremely disagreeable experience with insect foes, having had the trees under my charge bare of leaves and fruit in June through their ravages, but, thanks to the improvement in insecticides and the increase in knowledge of how to combat the enemies, we can keep them somewhat under control. In this dealing with insect pests we want a more united action amongst fruit growers whose fruit plantations adjoin each other; each one should do his utmost to spare none. If this were done throughout the country, future prospects would be much brighter and a vast amount of labour and anxiety done away with. At present if one man destroys all the caterpillars, aphids, &c., that may infest his trees, his next neighbour does nothing, thus providing a fresh stock for the industrious grower to fight against, and forcing him to battle annually to preserve his crops.

## MANURING.

Already great strides have been taken in our knowledge of chemical manures, and there is not the least doubt that the fruit grower in the near future will be able to do infinitely more by their aid than is possible at present. Soils vary so much in character, that what may prove of the highest service at one place may be practically useless at another. On light land we find potash lacking, and as this enters largely into most fruits, an application of potash in some form or other exercises a marked beneficial influence.

On heavy soils I think bone-meal has no equal, as it lasts some time in the soil, promoting a short sturdy growth and giving extra size and finish to the fruit. There are several first-class artificial manures, more or less suited to all soils, but which can only be determined by actual experience and a knowledge of the soil. While advocating the judicious employment of reliable chemical manures, we must not lose sight of natural manures close to our hands. One of the most valuable fertilisers from the farmyard is in the majority of places almost totally neglected, viz., the liquid drainings from cattle sheds and manure heaps; this is more powerful and immediate in its action than solid manures, and has a wonderful effect on the vigour of the trees and the size of the fruit, yet we see it treated as a nuisance on every hand. The object apparently is to get it away from the premises in as expeditious a manner as possible by way of ditches, brooks, or other available means. This ought not to be, and we may hope that such a cheap stimulant may be employed in our orchards to a much greater extent than now. Sewage, again, if put amongst the trees in winter would improve the appearance of the orchards, and pay over and over again for the labour incurred by the enhanced value of the fruit.

## PRUNING.

On this point opinions differ to a great extent, but the object of all is to get the greatest quantity of fruit of the largest size. In the past the knife has been used too much as a mutilator rather than as a pruner, the consequence being that more wood than fruit has been in evidence. Experience has proved that the knife should be employed only to remove weak and useless wood and to thin out the shoots, that each one may have sufficient light to ripen and properly mature its buds, leaving those that remain nearly their full length where possible, and, unless the seasons are very unfavourable, excellent crops will be the result. All old systems die hard, but I think in the future much less pruning will be done and heavier crops produced.

## RAILWAY RATES.

So long as the foreigner has the preferential rates for his fruit, the home grower will be seriously handicapped. I think nothing is more absurd than the fact that British capital has been spent in making our railways, and yet the Britisher has to play second fiddle to the foreigner, who has done nothing towards the making of the lines, &c. I question if any other body of traders would be allowed to tax the public so severely as the various railway companies do the home producer by their heavier charges. I do not intend going into figures to show the difference in favour of the foreigner, but I may state that in some cases the Englishman has to pay over 200 per cent. more for the same class of goods when carried the same distance. Is this fair? While kicking against these excessive charges, we do not want the railway companies to carry our goods at a loss, but only require them to put us on an equal footing with our rivals. On those conditions I feel sure that the British fruit grower will be able to hold his own against any competition from all parts of the world, provided the business is conducted with vigour and on sound principles.

**Apple Bismarck.**—“W. G. C.” (p. 481) asks for information as to the behaviour of Bismarck Apple in different localities, and also mentions that some growers give it a bad character on account of its proneness to canker with them. I have just looked over about 150 Bismarcks on the

English Paradise stock, two, three, and four years old from the graft, and have found no sign of canker on them, though other varieties of the same age are cankering rather badly. Three years ago I planted as an experiment thirteen four-year-old Apples on the Paradise. The ground is heavy, but the trees have lacked no attention since their planting, at which time they were clean, well-grown bushes. Pott's Seedling is nearly dead from canker, which has attacked every branch, and King of Tompkins County is in almost as bad a plight. Cox's Pomona, Cox's Orange, Stirling Castle, and Lady Sudeley have all cankered, but have made good growth this year notwithstanding, and have also fruited well. Lane's Prince Albert and Blenheim Orange show symptoms of the disease, while Bismarck, Peasgood's Nonsuch, Warner's King, Bramley's Seedling and Duchess of Oldenburg are all healthy, the last being in the pink of condition and as near perfection as possible. As far as my experience goes, therefore, it would appear that Bismarck, at all events in this district, is not so subject to canker as many other varieties. It has seemed to me that Apples on the Paradise are more liable to canker than those on the Crab stock, but I am told by a large grower that his experience has been that the reverse is the case.—S. W. F., *Torquay*.

**Grapes cracking.**—“J. C. B.” (p. 495) says “growers of Grapes do not seem to be quite agreed as to the cause of cracking.” The experience of “J. C. B.” as to dryness of the soil in his case is, I have not the least doubt, perfectly correct, although I must confess it is the first case I ever heard of Alicante being addicted to cracking, but the over-dryness explains it. The variety with which I ever had any trouble is Madresfield Court, but not of late years, as I have proved that cracking may be caused by sudden fluctuations of temperature, which I now prevent. My experience with this Grape is, that when the berries commence their second swelling and also commence colouring, if the ventilators are closed so early in the afternoon as to cause a sudden rise of the temperature, or kept too close in the morning before the ventilation is increased, cracking will take place. I am also of the opinion that if the berries are not thinned sufficiently, cracking is further aggravated. Under high culture the berries swell up enormously, but if this is anticipated at thinning time, cracking from this cause will be prevented. As a rule, I do not think the berries of this Grape are thinned out nearly enough. With a little warmth continually in the pipes—a limit, of course, being allowed during the hottest part of the day—with a free circulation of air, cracking will be prevented.—A. YOUNG.

## THE REPLANTING OF WALL TREES.

As the theory and practice of root culture become better understood it is probable that most fruit trees—on walls at least—will be planted a second time, about a year after the first. This is likely to keep the roots in the best place for the production of fruit-buds and also to mould them into the best form. The form of wall trees and the limited areas of their tops in contrast with those of standards, bushes and pyramids render their replanting or root-pruning more important. The chief dangers of young wall trees in favourable soils arise from over-luxuriance. This has been fostered from their youth up by concentration of force alike in root and top. The latter favours the rushing up of trees to saleable condition. Now one stopping of roots in the process of removal or planting does not suffice to eradicate the strong-growing habit. On the contrary, the first breaks on such roots will partake of the character of their immediate progenitors. The first roots after permanent planting often break away as strongly as those of the original maidens, and this natural excess of vigour at the roots is the parent of the sterile growths that crowd the tops of young wall trees with sappy wood that cannot possibly respond promptly with full crops of fruit of fine

quality. By carefully replanting trees a second time the roots will be led or gently forced into fruitful form.

Once trees are thoroughly established on these lines the annual crops of fruit mostly suffice to keep them on fruitful lines. However, another great advantage of a second planting is the establishment of what may be called with little or no exaggeration a semi-portable and intensely fertile character of root. Those possessing extensive experience in the raising and training of young trees are aware how tractable the roots are. After a few removals the trees are but little inconvenienced by root-lifting or replanting. Some cultivators go further, and assert that the trees thrive best through removal. Be that as it may, it is certain that such root-detachment and disturbance favour the highest possible degree of fertility.

D. T. F.

**The wild Medlar.**—Will any reader of THE GARDEN kindly tell me where I may procure plants of the wild Medlar or seedling plants of any kind of Medlar? I should also like much to know something about the distribution and habit of the Medlar in our country.—R. R.

**Peach Dr. Hogg.**—I note that "W. G. C." (p. 535) has a good word to say for this variety as being excellent for early forcing. I have not tried it for early forcing, but during the past nine years it has with me proved admirable in every way on the open wall. It is a very free setter, of good appearance, and most excellent flavour. I find it a reliable variety for open-air culture, and am glad to hear that it is equally so for early forcing.—Y. A. H.

**Apple Cox's Orange Pippin.**—It is unfortunate that this Apple will not succeed on all soils, and I think anyone who has had any experience of it will agree with "E. H." that it will not thrive on a damp, adhesive soil. The ideal soil for this Apple is a deep fertile loam with a dry sub-soil, and if not so naturally it should be made so by draining. When I first came here I planted a quantity, but the ground, I find, is too cold. I have replanted the trees on raised stations, hoping that by this method they will succeed. In selecting Apples for special soils it is very often not a question of what we should like, but what will succeed.—Y. A. H.

#### KEEPING FRUIT TREES APART FROM VEGETABLES.

THE short extract in the last volume of THE GARDEN (p. 535) on the desirability of keeping vegetables apart from fruit trees I entirely agree with. In many cases unfruitfulness amongst fruit trees can be distinctly traced to the system of cultivating the two in too close proximity to each other. Want of space is often given as the cause of this dual culture, but it is rather the outcome of an old custom. It is not even picturesque, for a garden with the trees scattered all about the vegetable quarters as well as along the walks has a very untidy appearance. The vegetables, again, are deprived of that very essential element to high culture, *i.e.* direct sunlight. Winter vegetables become drawn and are quite unable to bear the strain of a prolonged frost, and it is in those crowded gardens that such wholesale destruction takes place. Neither is it economical, for if ordinary care is taken when planning a garden to keep the fruit trees and bushes apart from vegetables, there will not be any space wasted, and each may have the culture which is necessary to ensure both good fruit and vegetables.

One of the greatest mistakes in fruit culture—that is if the most successful results are expected—is to deeply fork or dig over the ground within radius of the roots. A loose surface soil in itself is injurious enough, as fresh roots do not take readily to it; but the forking over destroys the surface roots and drives the lower roots downwards into what is very often a crude sub-soil. On a heavy clay land I have to be most careful in this respect, as the nearer the roots are to

the surface the better, so that they may receive the full benefit of sun heat. I have a long row of bush Cherries, and since they were planted, upwards of nine years ago, the surface soil has not been disturbed, and a forkful of soil within a radius of 10 feet could not be turned up without tearing up roots. These trees fruit abundantly and are never subject to gumming. In the case of bush Apples and Pears the soil only needs to be just pointed over, the manure, if this should be stable or farmyard, being just covered. I daresay the unfruitfulness of so many wall trees as seen now-a-days is due to digging too near the wall. The space left should be quite 5 feet or 6 feet wide, and the borders containing the roots of trees growing against north walls are best left intact if the space can possibly be spared. Y. A. H.

## GARDEN FLORA.

### PLATE 996.

#### ALTHÆAS.

(WITH A COLOURED PLATE OF *A. FICIFOLIA*.\*)

IN a comparatively recent monograph of the natural order Malvaceæ, Mr. E. G. Baker, of the



*Althæa officinalis.*

British Museum, enumerates over thirty species of Althæa. A small proportion only of these—perhaps some eight or ten species—are known in cultivation, and these are mostly confined to purely botanical collections. Were it not that the genus includes the plant from which the garden Hollyhock has sprung—*Althæa rosea*—it would be, so far as the majority of gardens are

\* Drawn for THE GARDEN in the Royal Gardens, Kew, by H. G. Moon. Lithographed and printed by Guillaume Severens.

concerned, an obscure and neglected genus. The Althæas are widely spread over Europe and Asia, and one species has been in cultivation that is found in the Caribbean Islands, two occur in Britain, and others have been introduced from Siberia and Northern India. The genus is, however, most abundantly represented in the region of the Grecian Archipelago and Asia Minor. The Althæas are nearly related to the Malvas, the chief botanical distinction being in the structure of the calyx. They are all herbaceous, some having annual or biennial, others perennial rootstocks. The Hollyhock may, in habit, be taken as characteristic of the genus, the stems being erect, varying in different species from 1 foot to 10 feet in height and furnished with large, usually palmate leaves. That the genus, as a whole, is not so much in favour with horticulturists as its merits entitle it to be is, I think, forcibly illustrated by the coloured plate published herewith, for *Althæa ficifolia*, although it has been in cultivation in this country close upon 300 years, shares to a considerable extent the general neglect of the Althæas. The larger proportion of the genus, however (or even of the species now in cultivation) cannot be said to be as worthy of so prominent a place in the garden as *A. ficifolia*. At the same time they are admirable subjects for planting at the back of wide borders and in open spaces in the semi-wild, partially wooded tracts of ground that so frequently surround gardens. In such positions naturally disposed groups if given fairly good soil and allowed sufficient space between the trees to admit sunlight, make striking features with their tall flower-stems, bright colours and large leaves. That there are few things which respond more readily to the gardener's art than these plants do is shown by what has been done in developing the Hollyhock from the wild *A. rosea*, and now that the disease has practically swept away the magnificent varieties which twenty or thirty years ago were the pride of hundreds of gardens—cottage and mansion—it might be worth while to take in hand and improve the best of the wild types of Althæa.

The perennial kinds can be propagated by dividing the plants or by seeds; the annual and biennial ones, of course, by seeds alone. It is best to sow the seed in February in pans kept in an unheated frame, planting the seedlings when large enough where they are required to be grown. If the weather does not prove showery after planting, the plants should be watered a few times, after which they will require but little attention.

*A. FICIFOLIA* (the Fig-leaved or Antwerp Hollyhock).—This species, perhaps the finest of all the Althæas, is nearly allied to *A. rosea*. In the opinion of Dr. Stapf, of the Kew Herbarium, who has lived and studied for a long time in the East, it may have been derived from it by cultivation. It is a plant which varies considerably, the height ranging from 2 feet to 5 feet and the colour from purple to yellow. It is, however, as a yellow or orange-coloured species that we know it in this country. The plant here depicted is a very fine form, which flowered in the herbaceous ground at Kew last July. It was from 4 feet to 5 feet high and bore a large terminal spike of flowers, each flower measuring 3 inches to 4 inches in diameter and being of a pale yellow colour, flushed with rose. The leaves are large, palmate, five to seven-lobed, differing chiefly from those of *A. rosea* in their narrow lobing. *A. ficifolia* is worthy of a place in the most select of herbaceous borders. Its native country is not certainly known. It is often given as Siberia, but Dr. Stapf thinks the species originated most probably in North-west Persia. *A. ficifolia* was known under cultivation as far back as 1597. The variety *glabrata* is a smaller form.







**A. ROSEA.**—This, the type or parent form of our cultivated Hollyhoeks, is said to have been originally introduced to this country from China in 1753. Whether it is truly a native of that country is perhaps doubtful; at any rate we know that it is abundant in Greece and other parts of the Mediterranean region. It grows to a height of 8 feet, the stem being furnished with large, cordate, five to seven-lobed leaves. The flowers are

rate of the former glory of the Hollyhoek restored.

**A. OFFICINALIS** (the Marsh Mallow).—This is one of our two British species, and is more especially common near the sea and salt marshes. Favourite districts are the fen lands of Lincolnshire and Cambridgeshire, on the banks of the artificial ditches and canals by which the flat lands of these counties are intersected. It attains a height of 2 feet to 4 feet, and has soft velvety leaves covered with a grey pubescence, and flowers of a delicate pink hue measuring  $1\frac{1}{2}$  inches to 2 inches across. In the old herbals it is accredited with many medicinal virtues. It is a perennial plant.

**A. HIRSUTA** is the other British species, and is found wild in the woods and fields of North Somerset. Its slender erect stems are 6 inches to 18 inches high; its leaves are reniform with long petioles, and its flowers are rosy purple and 1 inch in diameter. It is an annual. Some doubt has been expressed as to whether it is a truly indigenous plant, but if not, it has been naturalised for a sufficiently lengthy period to have become to all intents a British plant.

**A. CANNABINA.**—This species is a native of Southern France and Spain, spreading eastwards to Persia. It is a perennial, and is 6 feet high, having large palmate leaves with narrow lobes and coarsely toothed margins. The flowers are rose coloured.

**A. CARIBBEA** is, as its name implies, a native of the Caribbee Islands, having been introduced from there in 1816. Its flowers are produced on very short stalks, and are rose coloured with yellow centres. Whether it is now in cultivation is doubtful. It was figured in the *Botanical Magazine*, t. 1916, and is probably not hardy.

**A. NARBONENSIS** grows from 3 feet to 6 feet high and has pubescent, three to seven lobed leaves, the lobes being crenulated. The flowers are from 1 inch to 2 inches in diameter and of a pale purple colour. It is a native of France.

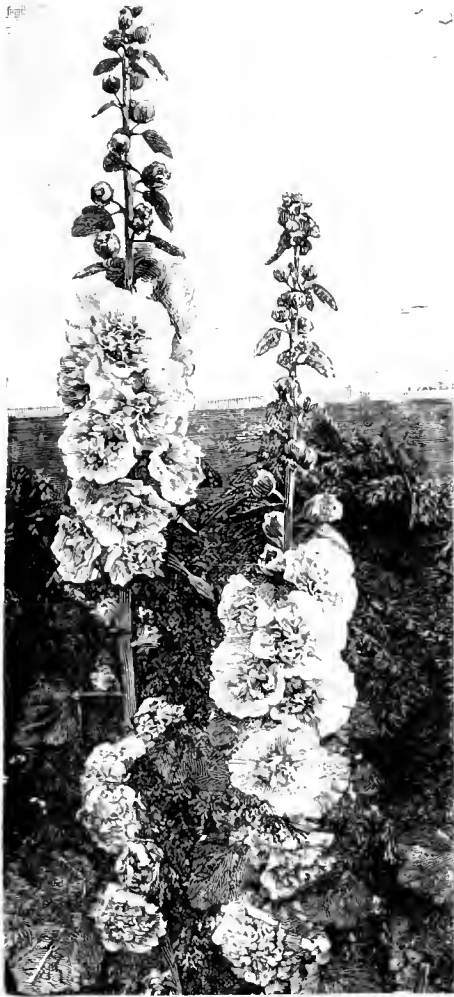
The nomenclature of these Altheas is very much involved, many of the species being subject to great variation and running one into the other by intermediate gradations. The following may be briefly mentioned as being either now or a short time ago in cultivation: *A. Froloviana*, a useful species flowering from August to October, tall in habit, and having orange-coloured flowers shaded with red; *A. lavateraefolia*, a native of Syria, with flowers near those of *A. narbonensis*, but of a deeper purple colour; *A. Hildebrandti*, 5 feet high, with white flowers, changing to pale yellow near the centre, and measuring 3 inches across; *A. striata* is another white-flowered kind; *A. flexuosa* is a North Indian species, probably tender, growing 2 feet to 3 feet high, and having large deep red flowers. The Syrian Hibiscus (*H. syriacus*), a shrubby plant, of which many single and double varieties are in gardens, is very frequently grown as *Althea frutex*. B.

## THE WEEK'S WORK.

### FRUIT HOUSES.

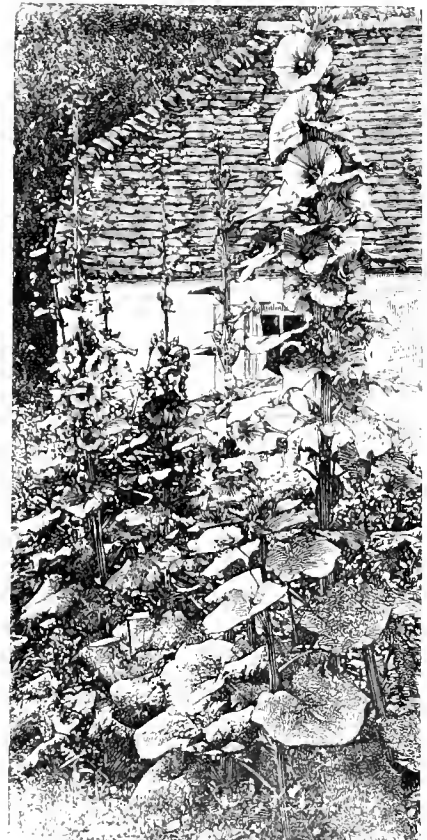
**EARLIEST PEACHES.**—The American varieties grown either in a separate compartment or isolated amongst other sorts and started in the middle of November will by this time be expanding their blooms, those of Amsden June, where grown, being fully open. This stage being reached, both the night and day temperatures must be increased somewhat, whether the weather is frosty or not, as Peaches in bloom at this season are favoured with few natural advantages, and the deficiency must be made up by artificial means. During absence of frost a night figure of 55° may be allowed, but if on cold nights the mercury falls to 53 by morning, no harm will result provided the house is not too moist and the trees not trained

too near the glass. A most important point with these early Peaches is fertilisation, which must be carried out daily, advantage being taken of gleams of sunshine to admit just a little air and secure a dry pollen by midday. Different growers employ different mediums for dispersing the pollen, the camel's-hair brush and rabbit's tail both finding favour; but if the trees are in good health and the fertilising organs strong, nothing supersedes the old-fashioned plan of moving a straw hat to and fro immediately beneath the trellis. Where there is a superabundance of bloom buds, most of those located on the underside of the trellis may be removed before expanding by drawing the band in a downward direction. Any malformed blooms should likewise be removed. The oft-advised plan of fumigating the house as soon as the first pink petal appears must in no case be neglected, or green-fly may be found to have gained a footing at a time when insecticides must not be employed and curled leaves and fallen blossom be the inevitable penalty. If the trees were watered on the near approach of the blooms opening, no more will be needed until the fruit is set, but where the trees are growing in tubs or cramped and shallow borders, a further supply of moisture must be given. Injury to the blooms from surface moisture may be avoided by simply applying half an inch of perfectly dry soil, the same being removed in due time. Husband all sun heat possible by closing the ventilators early, and bear in mind that the most fatal error in Peach forcing is attempting to hurry on the crop before the fruit has stoned. Where the earliest forced Peaches are grown in pots, these of



The double-flowered Hollyhoek (*Althea rosea fl. pl.*)

rose colour 1, measure 3 inches to 4 inches across, the pale yellow centre being often surrounded by a black-purple ring. It commences to blossom in June and continues right into autumn. This description, of course, applies only to the typical form of the wild Hollyhoek, itself a most variable plant. From it have been raised by selection and hybridisation numerous and beautiful varieties more or less double, and ranging in colour from pure white to deep yellow or rich crimson. The palmy days of the fine Hollyhoeks, however, are for the present over, and the glorious colour effects they produced in gardens throughout the country twenty-five years ago are now only to be seen in places few and far between. This, as is well known, is due to the ravages of the Hollyhoek fungus (*Puccinia malvacearum*), which is believed to be a native of Chili. It first showed itself in Europe in the year 1869, and in 1873-4 spread over the Continent, and made a clean sweep of all the carefully raised varieties whose high cultivation no doubt had rendered them particularly favourable for the attacks of this fungoid parasite. As was the case with the Potato disease, its virulence, which at first carried all before it, has in late years somewhat abated, and it is possible that the future may see some at any



The single-flowered Hollyhoek (*Althea rosea*).

course must be watered from time to time even when in flower, but if this is always done early in the day, and as far as can be during sunshine, by opening the front lights half an inch a slight current of air is produced without actual draught and the surface soil of the pots speedily becomes dry.

**POT VINES.**—In many instances growth will now be 1 inch or more long, and the rods require

to be brought up into their final position and secured to the wires. Disbudding, now that the bunches can be well discerned, may also be done, selecting the most promising and removing the more feeble where this can be done without creating irregularities. Towards the lower portion of the rods, however, where weaker breaks abound, a greater percentage of growths may be left, the better to draw the sap to that point and strengthen and improve the bunches. No rigid law can be laid down for stopping, so much depending on the strength of the individual growths those at the top of the rods generally being best stopped at two joints beyond the bunch, weaker shoots lower down benefiting from a run of four or even five leaves. The stored-up sap will now soon become exhausted and the call for a further supply be responded to by the formation of new roots. The balls at this juncture need special attention, as dryness or wetness proves fatal to all further progress; the happy medium is the only safe condition. On bright warm days a dewing over with the syringe may be administered for some time longer, especially if cold nights necessitate hot pipes and a somewhat arid atmosphere at daybreak. Where blinds are used on the roof glass I would advise their use even for a few hours during daylight in times of sweeping gales and searing winds, especially in exposed situations. The trellises in early Vine pits and houses being generally none too far from the glass, it is a good plan to leave the ligatures sufficiently long to allow of the reeds falling a few inches below them; even this will permit of the laterals being secured to the wires. Continue the sprinkling of floors at intervals, according to the presence or absence of sun, and admit no air through January unless the mercury runs up beyond 75°. Prunings of old Vines wanted for bottle grafting later on should be duly labelled and inserted into pots of soil, storing them away in a cold greenhouse or orchard house. Vine eyes may now be inserted either in small pots or pieces of turf covered with river or silver sand, and placed in a cold frame to callus by the time they are placed in heat in February. Vines in pots intended for inarching may now be removed to the early house and placed on slates over the hot-water pipes.

**PLANTING FILBERTS AND COBS.**—These are worthy more care and attention than are generally bestowed on them. An open site, soil of a fairly sustaining nature, and liberal mulchings in spring are not lost on the trees, liberal thinning, especially of the centres of the trees, resulting in far heavier crops than can be secured by the old thicket plan. The ground should be well trenched and plenty of manure worked in, firm treading also being necessary before planting the trees.

**DAMSONS.**—These are too often neglected, which is strange, considering how well they pay. Where practicable, avoid planting on exactly the same spot, but where this cannot be helped, a good cart-load at least of fresh holding loamy soil should be substituted for the old worn-out compost. Damsons do not object to partial shade, but the best crops are obtained where a maximum of sun and light reaches the trees. After planting, mulch, and, unless in exceptionally sheltered places, stake for the first season at least. No better or more profitable Damsons exist than the Farleigh Prolific and Old Shropshire. J. CRAWFORD.

#### KITCHEN GARDEN.

**FRENCH BEANS.**—There will be no fear of dwarf Beans sown at this date not podding freely if attention be paid to heat and moisture. A regular supply may be kept up by sowing every three weeks according to the demand. French Beans can often be grown in pots on shelves when space cannot otherwise be found. Now is a good time to make a start, as the Beans set more freely with longer days and more sun. To get the best results a light position, such as a shelf in a Cucumber house, will answer well. Good results are secured from small pots at this time of year. I find 6-inch

pots useful for the early lots, but much depends upon the space at command. Three plants in a 6-inch pot will give a fair crop, but if 8-inch or 9-inch pots are used, five or six plants will be sufficient. The old system of partially filling the pots with soil when sowing and top-dressing when the plants have attained a fair size I do not advise, as the surface roots have no time to lay hold of the new soil. The new soil holds the moisture longer than that full of roots, making it a difficult matter to water properly. Much better results are secured by filling the pots nearly full and giving supplies of food later on in a liquid state. If the pots can be given bottom-heat or placed over warm pipes germination is more rapid and a stronger plant secured, slow germination in damp soil being the cause of decay of seed. In no case should water be given till the plants push through the soil. Now is a good time to prepare a pit or warm frame for this crop. A good return is assured if a bottom-heat of 70° can be given. The soil should be placed in position, mixing some old Mushroom manure with it, and by the end of the month it will be in condition to plant. A depth of from 9 inches to 12 inches will be sufficient. I advise sowing the seed in 3-inch pots and planting out in preference to sowing in the bed. When planting make firm, and by keeping the plants clean two or three crops may be secured by top-dressing, stopping, and feeding. No Plus Ultra, Mohawk and Syon House are all reliable at this season for pot or frame culture.

**PLANTING POTATOES IN FRAMES AND POTS.**—If the sets have been prepared as previously advised, they will now be in condition for planting. The soil should be warm and not too moist, so that in planting, the sets may be made firm and the fibrous roots spread out as the work proceeds. I attach great importance to planting prepared sets, as if merely placed in holes in moist soil the roots are cramped and do not spread out well, with the result that only one or two tubers are made, with a mass of small or later ones of no use whatever. It is best to plant with a trowel, and if the soil is at all clayey or wet to place some finer material round the sets to assist the tender roots to lay hold of the soil. If planted with care out of boxes, with a mass of fibrous roots and the sprouts or tops 2 inches or 3 inches long, there will be no difficulty in getting good dishes in three months if there is no check of any kind. Give ample supplies of air in fine weather to prevent drawing, with occasional waterings of liquid manure as top growth increases. When placing the soil in frames for planting it is not wise to err in giving too little. Much the same remarks apply to the culture of Potatoes in pots.

**SEAKALE.**—This vegetable will now come in even more useful than earlier in the winter. The weather having been mild, there has been no lack of good vegetables, this to a great extent saving the forcing supplies. If the Seakale grown specially for forcing has not yet been all lifted there should be no further delay, as it often happens we get a sharp frost when least expected. By lifting, laying in soil, and covering with litter, it is easy to get at the crowns when required.

**ASPARAGUS.**—Another lot of roots should be lifted if a supply was wanted at a certain date. From good roots lifted and placed in a genial temperature a supply may be had in three weeks, as the roots will force more readily now than when I last advised forcing lifted roots. Much the same routine must be followed as advised earlier. If a pit heated with hot water can be spared, there is no difficulty in getting regular supplies. If the heating agency is stable manure, it is well to incorporate a liberal quantity of leaves with the manure to prevent a violent heat. A steady heat will produce finer heads and of good quality if a liberal amount of air is given in mild weather and plenty of light. I noted the importance of forcing permanent beds, and the best means to produce strong growths from the end of February or earlier. Now is a good time to commence forcing in the open, and to get the alleys or space between the beds cleared out to make room for the forcing material.

**RHUBARB.**—This will be in demand from this date, and if a good stock is grown there need be no break in the supply. I noted the importance of lifting a good quantity of roots in advance, merely covering them with litter to check growth. Such roots placed in heat now will come in several weeks in advance of those lifted from their growing quarters and placed in heat. In lifting good-sized roots it is well to bear in mind that future years have to be considered, and if small pieces with a crown are detached from the roots when lifting, these make nice material for planting in March if laid in. Many shifts can be resorted to in forcing Rhubarb, and, provided there is an absence of rank steam, good growths may be secured. Now is a good time to cover outside roots. Should proper forcing pots be out of the question, equally good results may be secured by using old barrels, boxes, crates or such like. In covering avoid getting a violent heat.

**FORCING VARIOUS ROOTS.**—There will be more demand for other roots, and one of the best is Chicory. I have for the last few years grown the Witloof. The above root forces so readily, that it is not necessary to place large quantities in the house at one time. The roots winter well if plunged in the open and covered with litter in severe weather. Swede Turnips placed in a dark cellar force very quickly, and the young tender growths form a nice vegetable. Herbs will now be in greater demand in a green state. Mint should be lifted and boxed or placed in beds in heat. Tarragon will require similar treatment. Chervil and Basil should be sown in boxes, watering carefully for a time. G. WYTHES.

#### BOOKS.

##### THE LIFE OF RICHARD OWEN.\*

ONE of the most interesting men of our own day is the subject of this memoir, and one of the greatest of scientific men. A thorough master of his own work, he was much more than most men of the day, remarkable for having a heart for other things, being deeply interested in literature as well as in science, nothing of interest to human beings failing to engage his attention. He was remarkable also for a wonderful power of clear and pleasant talk. Interesting as the book is in many ways as the work of a very young man who hardly saw his grandfather in his best days, it gives rarely any idea of Owen's charming power as a talker. He was not by any means one of those who do all the talking themselves, but he was a delightful and sympathetic listener to every suggestion, and in fact charming to meet at the breakfast table or anywhere else. For many years of his life he lived in that pretty little garden round Sheen Cottage, which we have had the pleasure often of speaking of in THE GARDEN in past years.

Richard Owen, younger son of Richard Owen formerly of Fulmer Place, Bucks, was born at Lancaster on July, 1804. On his grandmother's side he was descended from Richard Eskridge, High Sheriff of Bucks in 1741, and owner of Fulmer Place, in the same county. His mother was of French extraction. She came of a Huguenot family of the name of Parrin, who came over from Provence at the Revocation of the Edict of Nantes. A woman of great refinement and intelligence, she was also an accomplished musician, a talent which she inherited from her father, a professor of music. In appearance she was "a handsome, Spanish-looking woman with dark eyes and hair," a complete contrast to Richard Owen, senior, a typical "John Bull" in face and figure and with a bluff, burly, obstinate disposition. Owen himself was never tired of speaking of his mother's charm of manner and all that he owed to her early training and example. Of their six children, the eldest of the two boys—James Hawkins Owen—died at Deme-

\* "The Life of Richard Owen." By his grandson, the Rev. Richard Owen, M.A. Two volumes. John Murray, Albemarle Street.

rara of yellow fever in 1827. After some preparatory instruction from an old Quaker lady, Richard Owen at the age of six was sent to the Lancaster Grammar School. Nothing is to be seen of this school now, except perhaps the dated stone which used to be over the porchway. Whewell, the famous Master of Trinity, also received his education there, and another schoolfellow was Higgin, late Bishop of Derry. At that time Owen is said not to have exhibited any marked fondness for study. He would, his biographer says, speak feelingly of a day which recurred at regular intervals, known as "Black Monday," when the accumulated misdemeanours of the week were wont to be expiated. Rightly or wrongly, an increase in the pains and penalties was attributed by the scholars to Whewell, whose precocious relish for mathematics and study in general had considerably raised the standard of work, and Owen, though much his junior in age and standing, was loud in his taunting expressions of disgust. Whewell, in administering a reproof, excited the wrath of Richard's big brother James, and the result of his indignation may be gathered from a remark of Owen's mother, to the effect that she thought it most ungrateful of "that boy Whewell" to have "blackened her eldest son's eyes so shockingly." But the younger Owen and Whewell became the best of friends, and their friendly intercourse continued without a break until the latter's death in 1866. At the age of fourteen Owen had given no signs of a taste for the work to which his life was afterwards devoted. Heraldry appears to have been his earliest hobby. After leaving school he was apprenticed to Leonard Dickson, of Lancaster, surgeon and apothecary, on the death of whom he was "assigned, transferred, and turned over" to one Joseph Seed. A further transfer took place, when Mr. Seed accepted a post as surgeon in the Royal Navy, to Mr. James Stockdale Harrison in 1823. We gather how impressionable Owen's nature was on hearing that both his appetite and ardour for science were at the outset somewhat damped by the "natural awe which the human corpse inspired," even among the matter-of-fact surroundings of the dissecting room. At one time, after an unusually "uncanny" experience, he mentally vowed never again "to desecrate a Christian corpse and to quit a profession that could only be learnt by such practices."

In October, 1824, Owen matriculated at Edinburgh University. In the interval between that date and 1836 we find him M.R.C.S., in 1832 bringing out his memoir on the "Pearly Nautilus," professor on comparative anatomy at St. Bartholomew's, and F.R.S. in 1834, and married to Miss Caroline Cleft in the new St. Pancras Church, Euston Square, on July 20, 1835—his birthday. In 1837 Owen was elected to the professorship of anatomy and physiology in the College of Surgeons, vacated by the retirement of Sir Charles Bell. At about this time he began gradually to relinquish his medical practice in order to devote the whole of his time to scientific research. The Fullerman professorship of physiology at the Royal Institution he was obliged to forego, owing to a paramount engagement in relation to the catalogue of the Hunterian collection. In the same year, 1837, he was made a member of the Imperial Academy of Sciences at Moscow. In 1838 he visited Germany for the purpose of attending the meeting of German naturalists at Freiburg, and he relates in an amusing way how he and Mr. White Cooper obtained the use of the Prince Archbishop's carriage to enable them to take part in an excursion of the association by personal appeal to his Eminence.

"His Eminence was in bed, but the urgent Professor (Erchricht) was admitted, and set forth in glowing terms the merits of the two deserted scientists, the distant lands from which they had travelled, the estimation in which they were held by the 'association,' and especially the exemplary obedience to directions which had led to the disappointment caused by ruder—especially French—visitors. The Archbishop turned on his pillow, and, in choice ecclesiastical Latin, pronounced 'Then the last shall be first and the first

last,' and gave his orders to the attendant chaplain accordingly. The archiepiscopal coach being horsed and manned, the Professor rejoicingly returned with it to the Town Hall."

To enumerate in chronological order every step in this active and distinguished career would take too long. But, following him into his beautiful garden retreat at Sheen Lodge on April 13, 1865, we find him writing to his sister Maria: "We have now a lovely bed of Hyacinths out and the adjoining Tulip bed is beginning to show colour. The Horse Chestnut leaves are unfolding, but it is unseasonably dry. The orchard house shows a glorious blaze of blossom, with the bees busily humming and the warmth giving quite a mid-summer character to the interior. The wild Hyacinths, Arums, &c., I brought last year from Norfolk are all springing up or in flower. I think you will find the garden this year quite up to the mark."

In his declining years it was one of Owen's favourite amusements to observe the habits of the birds which frequented his garden, and the notes which he made upon his feathered visitors were, as he writes in his diary, "communicated to my friend Robinson's weekly paper—THE GARDEN—in successive numbers." The number of birds which the Professor noted in his garden at Sheen Lodge might well surprise even those who pride themselves on their observation of such things. "I have entered in my garden book," he writes, "the name of every kind of bird which I have noted there, distinguishing the permanent dwellers from the occasional residents, and the latter according to the periods of their temporary sojourn, whether to breed or to feed—in other words, the summer and winter visitors."

On January 5, 1884, Professor Owen was gazetted K.C.B. on his retirement from the British Museum, and on Mr. Gladstone's initiative his pension was supplemented by £100 annually. The death of his only son took place in 1886, and shortly followed that of his remaining sister. His closing years were passed at Sheen Lodge in the companionship of his eldest grandson until 1889, when his daughter-in-law and the rest of his children came also to reside there. His time was occupied chiefly with his correspondence and reading. He would, says his biographer, "read anything that came to hand, from the latest scientific work that was sent to him to the *Queen* newspaper, which journal was a source of unflinching amusement to him, owing to the numerous advertisements of hair dyes, washes for the complexion, and the 'anatomical impossibilities,' as he called the ladies of the fashion plates. . . . The love of his home and of his beautiful garden only grew stronger with his declining years. Every day he would go round his garden—no small distance—supported by his favourite curiously carved stick."

Early in the year 1889 Sir Richard Owen was seized with an attack of illness very like a paralytic stroke, from which he never entirely recovered. In his library, hung with medallions and miniatures of various men—Newton, Cuvier, John Hunter, William Cleft, Joseph Banks, and others—as well as oil paintings of John Hunter and Oliver Cromwell, he would sit for hours looking out wistfully at the park view, the little piece of water with the two old Oaks by its side, the wide expanse of green over the dark background of trees, his favourite companion a little black and white Persian cat.

"In the early morning of his last birthday (July 20, 1892) the tree which he admired more than any in the garden—the *Gleditschia*—fell down with a crash, leaving only part of the trunk and a few branches, although there was little or no wind at the time."

By a curious coincidence, says his biographer, on that day Sir Richard showed marked symptoms of failing strength. Shortly before his death he received a visit from the Prince of Wales, the Princess May, and the Duke of Teck, who stayed for some time and talked at his bedside. During the whole of his illness the Duke and Duchess of Teck and Princess May frequently came to Sheen

Lodge, and to stay and talk with him. On December 16 he ceased to recognise those that were standing around him and became very restless. A little before 3 o'clock on Sunday morning, December 18, 1892, he passed peacefully away.

The book is well printed and neatly bound, with portraits of Professor Owen at various stages of his life. It also contains a monograph by Professor Huxley on "Owen's Position in the History of Anatomical Science." The list of his honorary distinctions is long enough to fill nearly four pages of small type.

#### LIST OF TREES AND SHRUBS IN THE KEW ARBORETUM.\*

THIS, which deals with the Polypetalæ, is the first of a series of hand lists of the collections of living plants cultivated in the Royal Gardens which it is intended to issue from time to time. The importance and magnitude of the work may be judged by the fact of a rough census of the species and distinct varieties of plants cultivated at Kew, giving the total number as approximately 20,000, of which 3000 are hardy shrubs or trees. We are very glad to see a beginning of this list, for which we have only praise, but regret that the tree list was not published at the same time, as its being published in parts will necessitate several indices. As it is, it will perhaps be better to keep the present index in type and complete it, otherwise the book when complete will have several indices. It is an extremely useful and handy little book, and would have, perhaps, been better still if the size had been a little larger—more like the old Kew list of herbaceous plants, in fact. But we are very glad to get it in any shape, and we hope that the catalogue printing will continue until all the collections are embraced. It would, we think, be some improvement if the name of the genus were repeated in full on the top of each page in the case of large families.

#### A HANDBOOK TO THE PRIMATES.†

THESE volumes belong to the series known as "Allen's Naturalist's Library." Great interest attaches to the study of the monkey, whose habits, cries, and physical characteristics so closely resemble those of the human race, that sportsmen confess an unconquerable repugnance to taking his life, and even hardened naturalists speak with pain of the human-like distress which a wounded monkey exhibits. In these two moderate-sized volumes a great deal of information is imparted in clear and concise language regarding the habits, habitat, and physical characteristics of the monkey tribe, from the huge, ungainly gorilla to the graceful and soft-eyed lemur. The volumes, however, though clearly printed, are not well put together, and show a tendency to come to pieces with very slight handling. The coloured lithographic illustrations, too, seem to leave something to be desired, though this was probably unavoidable. It is, of course, well known to our readers that monkeys in gardens are not desirable visitors. In Northern and Central India, where the Hanuman monkey is held sacred and generally protected, it is no uncommon occurrence in the Northern and Central Provinces to see numbers of this species perched upon the roofs of houses. The damage they inflict on gardens and fields renders them a great nuisance. At Simla, the summer headquarters of the Indian Government in the Himalayas, a large troop of Macaques attached to the Hindu temple do considerable damage in the kitchen gardens of the mountain residences, so that the gardeners have to keep a sharp look out and fire upon them occasionally. Dr. Bowdler Sharpe, who was at Simla in 1885,

\* "Royal Gardens, Kew, Hand List of Trees and Shrubs Grown in the Arboretum." Part I.

† "A Handbook to the Primates." By Henry O. Forbes, LL.D., &c. Edited by Professor Bowdler Sharpe. Two vols. W. H. Allen and Co., Ltd., 13, Waterloo Place, S.W.

relates that the fakir who lived at the top of Jocko was much offended because one or two of his clients had been wounded in this manner. This man had tamed the monkeys to such an extent, that when he called them the trees instantly began to move in all directions with the approach of numbers of these animals hastening to him for the peas which he had in readiness for them. They clustered round him, and though they would not allow strangers to stroke them, they came within arm's length and picked up their food. One patriarch, who remained for some time after the tribe had disappeared into the trees, was called the "Subadar," and wore quite a venerable appearance. The picture will be familiar to many of our Anglo-Indian readers.

## FLOWER GARDEN.

### SNAPDRAGONS.

(ANTIRRHINUMS.)

Of the common Snapdragon, the garden varieties are now numerous, and often showy in effect, the best being the pure colours (*i.e.*, not striped). They fall into several "races," according to their height.

The race is divided into three sections based upon the length of the stems:—

1. Tall varieties.
2. Semi-dwarf varieties.
3. Dwarf varieties.

The large-flowered Snapdragon, even when wild, differs greatly, the result of situation, and when under cultivation through the efforts of gardeners to produce new varieties, so that it gives us from seed the greatest variety of form. These differences are, however, in the good kinds confined to the colour of the flowers and the tints of the foliage. Thus in a single mixed sowing, of the variegated Snapdragon it is often possible to find from twenty to twenty-five different forms as regards the flowers, although closely resembling each other in habit, height and foliage. So also with the semi-dwarf kinds. Still, amongst plants so dissimilar we shall find that certain colours and forms are reproduced from the seed with a certain degree of regularity. By saving the seed from such plants and re-sowing, we obtained a fair quantity true to their original form, and in the course of several years' sowings, by getting rid of all but the selected types, we obtained the first of our fixed varieties. A more difficult matter was to get rid of certain exceptional colours which sometimes showed themselves in mixed seedlings. The desire to obtain striking varieties is easy to understand; baskets of vari-coloured flowers, although pleasing when near, are when seen at a distance not so good in effect. On the other hand, by arranging the different varieties in groups of simple colours alternately we get striking effects and a certain fulness, it may be repose, but in any case effect is gained. In making our borders it was necessary to choose plants that were regular and of one colour, low-growing plants being preferred; and therefore we had recourse in the first place to the dwarf varieties.

Before giving a short description of the prettiest kinds let us say a word about the division of the Snapdragons into the three races according to height.

**THE TALL RACE.**—These plants attain a height of 1 ft. 8 in. to 2 feet (sometimes more) when closely planted, and in large beds in French gardens may be planted in groups of 6 feet or 8 feet, encircled sometimes by corresponding varieties among the dwarf kinds to a depth of a few feet. In smaller beds the plants may be isolated. The centre may be formed of

large baskets in places most exposed to the heat of the sun where few other plants could live. Sowings should also be made in order to obtain those superb branchlets which with their long spikes are so precious for the making of bouquets. Should the plants show too many flowerless branches, we have only to cut down the stems 4 inches from the soil, and six months afterwards they will produce fresh flowers.

**THE SEMI-DWARF RACE.**—These, which grow 1 ft. 4 in. to 1 ft. 8 in. high, may be used in the same way, and they lend themselves especially to the filling of baskets for which the habit of the large kind is too pronounced, and to the adornment of rockwork and of dry, arid walls. It is in this race that we find the greatest variety of colour. Though the flower-spike is not so long as in the preceding race, there is no decrease in the size of the flowers.

**DWARF, OR TOM THUMB RACE.**—In the old race of dwarf Snapdragon, or Tom Thumb, the plants for the most part had spikes of considerable length, and which were sometimes slender. Repeated selection from these has resulted in the production of plants of a peculiar habit and distinct race. The flower-bearing branches attain a height of 6 inches to 7½ inches, and a breadth of some 10 inches. They are composed of a great number of short, thick branches, the foliage being abundant and of a black-green colour. The flower-spikes are very thickly set, more especially in the case of the white-flowered and yellow-flowered varieties. Where many branches bloom at the same time the plant presents a mass of closely-set flowers, to which the foliage of the outer branches is as a frame. Other varieties are rather less dwarf, and their spikes have the form of enlarged cones, as with the feathery-flowered variety. The foliage of the race is throughout of a dark colour.

#### THE TALL VARIETIES.

**PURE WHITE.**—A superb plant, with pure white flowers, the bud a very pale greenish white, the swellings of the lower lip of a very clear yellow tint. The stems and foliage are of a handsome clear green.

**WHITE, WITH ROSEY STREAKS.**—Thin cherry-rose streaks or lines are traced upon the flower on a white-lilac-like ground. Both are very clear varieties, and, like the pure yellow described lower down, very precious for bouquets.

**BRILLIANT.**—A pretty purple and yellow flower.

**CRESCIA.**—A superb plant, flowers of a very decided red colour, but very striking. The tube of the corolla is reddish violet, also the underneath of the upper lip.

**DALIA.**—The tube and extremity of the lips of this are white.

**ELGANT.** This is of a beautiful decided red or carmine, a very brilliant colour coming between the clear and the pronounced tints.

**PURE YELLOW.**—Flower large and self, a very pure lemon tone.

**KERMESINA SPLENDENS.**—Flowers very large and spikes long, of a striking deep red colour, the lower lip still more so. The leaves are reddish violet in colour.

**NIGRICANS.**—The most pronounced colour of all, being a red-brown (almost black) and velvety.

**PANACHE.**—A mixture of colours, yellow or black ground and variegated, streaked or dotted with cherry-red or violet-red streaks or dots.

#### SEMI-DWARF VARIETIES.

**PURE WHITE.**—This is like the large-branching variety, but smaller.

**ROSY WHITE.**—A pretty, very pale, slightly lilac shade.

**CONSTANTIN TRITIAKOFF.**—Purple-red, lip yellow, tube white.

**FIREFLY.**—Handsome and large carmine flower with white tube, and on the swelling of the lower lip a yellow stain.

**NIGRICANS.**—Corresponds to the same variety among the large-branching kinds.

**VARIEGATED.**—Corresponds to the same variety among the large-branching kinds.

**PURPLE.**—The entire flower red, but the red on the tube duller.

#### DWARF VARIETIES.

**WHITE.**—The spike of this is very short and the blooms very large, whilst the swelling of the lower lip is slightly tinged with very pale lemon-yellow. The buds before opening are of a rosy yellow shade.

**YELLOW.**—Similar to the larger-growing form, the flowers of a very pure sulphur-yellow shade.

**COPPER COLOUR.**—Rather larger than the two preceding varieties. Flowers copper-red or mahogany on a yellow ground.

**VARIEGATED.**—A variety differing slightly from the race, the spikes being perceptibly longer. This should be 10 inches high or thereabouts and of equal width. The flowers are streaked and dotted on a yellow or white ground.

#### CULTIVATION.

Snapdragons are easy of cultivation, light sandy and cool soils suiting them perfectly. They are propagated from seed, which may be sown at different times of the year: (1) In August on the spot where they are to grow, or preferably in seed-beds, in which latter case plant close to a south wall, sheltering from continued frosts of 3° to 4° with dry leaves, straw, &c. Plant them out in the spring 16 inches to 24 inches apart. (2) In June or July in seed-beds in a well exposed position, planting out the seedlings in the spring. (3) In seed-beds (March to April) at the foot of a south wall. Transplant when the plants are sufficiently developed, and they may also be transplanted to seed-beds and planted out when the flowers commence to show themselves. By means of successive sowings it is possible to obtain an almost uninterrupted bloom from June until frost comes. Snapdragons are also propagated by cuttings made in the spring or summer, and even during the whole of flowering time. With Snapdragons, as with a great number of other plants, the colour of the stems and leaves of the young plants may to a certain point indicate to us what the colour of the flowers will be. Thus, kinds with green or light coloured stems and leaves will have in nearly all cases white, or mainly white flowers, or of which the colour is undecided; whilst of the plants which produce flowers of a decided colour, the stems and the leaves are of a pronounced green tint, more or less purple or ruddy also. In addition to the uses indicated above, these plants are specially adapted for ruins and rock gardens.—*Les Fleurs de Pleine Terre.*

**Red and white Daisies.**—For filling flower beds cheaply Daisies should not be lost sight of. If we start with a few dozen we can soon make them into thousands if required, and, unless through carelessness, we need never lose them. After they are lifted from the beds in May divide and plant out in nursery beds in a shady spot if possible and water for a time till established, and there will be plenty of stocky stuff to fill the beds in autumn. What soft lines of colour Daisies make if one really wishes for long, straight lines. I was kept waiting at a country station several hours last spring, and to while away the time I sauntered into the little village, and what a place for Daisies it was. Long lines of white and red Daisies led up to the cottage door in more than one garden, and very charming they looked. The red and white are most useful for filling beds or making edgings. The Hen and Chickens Daisy is less common and more expensive to purchase,

and the variegated leaved forms are more difficult to manage—at least I have found them so. A small bed filled with white Daisies and a broad band of red Daisies round will have a neat effect. They always look fresh, no matter what the weather may be, and if mild, flowers may be gathered more or less all winter. I could gather a bouquet of Daisies now if I wished, but I would rather see them growing.—E. H.

CAMPANULA RAINERI.

I HAVE no desire to prolong the discussion with Mr. H. S. Leonard on the subject of *Campanula Raineri*, as it appears to me to be both an unprofitable and an unseasonable one. Mr. Leonard tells us that his *employé* wrote to him, stating that this plant is very common in Italy; but, on the authority of botanical writers and from the information which I have received from two living botanists of Lombardy—the only ones who have taken up this question—I can assert that such is not the case. Further argument is, therefore, needless. I hardly think it worth while to defend myself against the malicious insinuation which Mr. Leonard makes against me personally when he speaks of my rooting up plants on the mountains, as the plant which gave rise to the discussion belongs to the class of "rare" plants which are the only kinds protected by our association, and also by the alpine clubs of several other countries, and I may just remind Mr. Leonard that this matter of rooting up rare plants originated with himself, and not with me. Four years ago Mr. Leonard accused our society of being the authors of the anti-*Phylloxera* laws, which do not permit plants to be sent by parcel post, unless officially certificated, to those parts of Europe in which the Vine is cultivated. At that time we had no trouble in proving to him that we had nothing to do with these laws, as our society was not founded until long after the promulgation of the said laws. It appears to me that Mr. Leonard is now eager to accuse us of other misdoings, but I shall not concern myself about the exoneration of our society. Mr. Leonard and I do not appear to have been created to understand each other. I shall, however, as strongly as possible dispute his claim to act rightly when, instead of supplying a plant which some customer may have ordered from him, he substitutes another plant which, in his opinion, is superior to that which his customer has ordered. He mentions, as an example, *Primula nivalis* (Hort.), which, in his opinion, is superior to *P. nivalis*, Pall. (the true species). I must here take exception to his views in this matter, as dealings of this kind are very detrimental to the good name and credit of horticulturists, and contribute to the introduction of the most lamentable confusion in the world of plants. For instance, in the case of the plant in question, I am not at all, and rightly so, of the same opinion as Mr. Leonard. In the modest Siberian plant I perceive a grace, an elegance, a purity of form, in fine, a poetry of expression which is not to be found in the *P. nivalis* of the gardens, and I can well understand how an amateur who is alive to this poetic expression and delicate language of the flowers of the snowy regions would be anxious to obtain the aristocratic *P. nivalis* (Pall.), more especially if he had already on his rockwork the rich *parvum* which bears the same name. Under any circumstances I deny that the vendor of any kind of wares has the right to prescribe to me in matters of taste. I may admire a certain plant and prefer it to some other plant which my neighbour values more highly. Individual tastes and ideas of colour are no subjects for argument.

In conclusion, permit me to repeat my former advice to Mr. Leonard, viz., raise your plants from seed, and you will have them hardier and more healthy than plants from the mountains. I have never succeeded with any of the plants which Mr. Leonard has sent me from his nursery, except a solitary *Crocus* bulb. But I do not find fault with the condition of these plants. On the contrary, I know by experience that plants with

thick, heavy, tumid tissues never succeed in a dry climate like ours, while, on the other hand, it is equally true that plants raised in our dry, warm climate, where they cannot grow as they would in England, succeed ever so much better when transferred to a suitable climate in which they can find themselves as much at home as they appear to do in England.—H. CORREYON.

— May I send just a line on M. Correyon's behalf? It so happens that I am well acquainted with his usual practice. About five or six years ago I accompanied him on one of his botanical expeditions among the mountains to the south of Martigny. His headquarters were at Mauvoisin, and from thence he proceeded to his work. On one occasion he set his heart on the ascent of Mont Avril, and I went with him to the end of my tether, when he and the guide left me, and I had to solace myself for seven or eight hours as best I could on a plateau not very far from the huge glacier D'Otemma, amidst a profusion of *Anemone vernalis*, *Azalea procumbens*, *Soldanella*, *Gentians*, &c. In the evening M. Correyon returned with his hands and his case full of the blossoms of *Eritrichium nanum*, *Androsace obtusifolia* (I think), *Gentians*, &c., but he had not a single rooted plant with him, nor did he display one at the little inn at Mauvoisin in the evening—nor did he take one back with him to Geneva—of any sort, to the best of my belief, as the result of his journey. On the contrary, the burden of his song invariably was that alpine plants should be grown from seed, and I have seen him over and over again bounce down avariciously upon the seed-vessel of some scarce plant which he desired and carry it off with him. Besides, it is not to be supposed that well-known savants, bankers, &c., of Switzerland and other countries would allow themselves to be stultified by the action of one in whom they put (to my knowledge) the greatest possible trust. I have read Miss Willmott's note in your impression of December 15, and I quite agree with what she has said. H. EWBANK, *Ryde, Isle of Wight.*

DECEMBER IN SOUTH DEVON.

THE past December has been a comparatively warm and sunny month, the mean temperature being 45.5°, or 3.9° above the average, while the sunshine recorded (73 hours 10 minutes) is 15 hours 45 minutes over the usual allowance for December. On twenty-one days has the sun shone, and on only six days, or rather nights, has the thermometer on the Grass fallen to freezing point, the lowest reading being 24.8° on the 31st. Rain fell on twenty days to the amount of 2.21 inches, or 2.77 inches below the rainfall of December, 1893, and 1.01 inch below the average, which is 3.22 inches. The total rainfall for the twelve months amounted to 43.23 inches, an excess of 7.74 inches over the average of 35.49 inches. The year's sunshine, on the other hand, has been decidedly meagre, being no less than 432 hours 35 minutes below the sunshine of 1893. For twenty-seven days out of the thirty-one the wind has been in the south or west, and throughout the month has been boisterous, the total horizontal movement having been 9292 miles. The greatest velocity was reached on the 22nd, when 734 miles were recorded, a rate of 44 miles per hour being registered between 4 and 5 a.m., some of the gusts travelling at the rate of 100 miles an hour. On the 2nd I picked a large bud of *Magnolia grandiflora*, which opened well indoors, and until the frosts of the last two days of the month unseasonable blooms of many species of flowers were noticeable, among them being *Doronicum Harpur Crewe*, *St. John's Wort*, scarlet *Genm*, and *Myosotis*. *Primroses* have commenced to bloom in the sheltered nooks of the lanes, and a few *Tea Roses* might have been picked from the south walls on most days of the month. On

a warm terrace, trained up the sheltering rocks, *Physianthus albens*, a little-known climber, was flowering in the open during the second week of the month, and *Solanum jasminoides* is still producing its graceful sprays of white blossoms. The giant *Christmas Rose* (*H. maximus* or *altifolius*) has been in bloom now for nearly three months, and seems likely to continue for another three weeks. As a rule it is over before *Christmas* and does not commence so early as *October*, which this year it did, the first flower being picked on *October 18*.

Many plants will suffer severely from the damp and open autumn and winter. *Tree Paeonies* had pushed out young growths fully 6 inches long. These have been killed by the frost of the 31st. Plants of *Agapanthus umbellatus*, which had been covered up with matting and had passed through much harder frosts unhurt during last winter, have also been damaged owing to the sappy condition of the leaves, but the crowns being well matted with a thick layer of leaf-mould will probably escape injury. Bulbs generally do not appear so unusually forward as they seem to be in some localities. Let us hope that what we lose in earliness we may gain in prolonged and bounteous supply. S. W. F.

FLOWER GARDEN NOTES.

HERBACEOUS PLANTS FROM SEED.—Although in the majority of places little attention is given to raising a stock of herbaceous plants in any variety from seed, it is a question if it is not a branch of flower gardening that does not deserve more attention. One is sometimes met with the argument that we have plenty of bedding plants for the formal garden, and many herbaceous plants are short-lived so far as their flowering season is concerned, and are, therefore, hardly admissible in prominent places where a good and constant supply of bloom is required for a given time. This may be partly true, but in the case, for instance, of *Antirrhinums*, *Pentstemons*, *Carnations*, *Violas*, &c., we have even a longer flowering season than is obtained from the majority of tender plants; whilst others that are more quickly out of flower, as *Pyrethrums* and *Columbines*, are beautiful in their foliage, and may at any rate be planted sparingly in clumps with other things. Take also the case of herbaceous borders. Are they full of good things, or is there a mixture of weedy rubbish and a lot of shrubs and small conifers that are quite out of character on such? If so, by all means (as excellent strains are now obtainable from all the best firms) secure packets of seed of such things as *Poppies*, *Pyrethrums*, *Carnations*, *Polyanthuses*, *Aquilegias*, *Antirrhinums*, *Pentstemons*, *Campanulas*, *Foxgloves*, *Verbasiums*, and *Delphiniums* that will in their respective heights furnish a grand display. Even if not wanted for flower garden planting they are sure to be useful, and in all cases where there is a great demand for cut flowers I would say never be without your nursery beds of perennials. A small stock in variety once obtained, the best seedlings can be selected for future seed saving and sowing. Fortunately, too, in the case of the majority of hardy flowers one is, with careful selection, fairly certain of a good plant, good average flowers, both individually and in the spike or truss, and occasionally some interesting new departures. All species that will flower the same season if require I should be sown early, say about the end of February, either in a pit or preferably in boxes, placing the same in a vinery that is at work not too far from the glass. Let me, however, strongly advise all who are contemplating raising a stock of such plants not to attempt more in the spring than they can manage well. If there is a possibility of other work pressing rather hard at this season, it is best to defer the sowing until the end of the summer; transplant and plant out in spring. Naturally, nearly all the family being hardy can be sown in the open, and where this is

done it is advisable to use a rough frame or pit so as to have the scollings close under the eye, and be able to guard against enemies in the way of slugs, maggots, or birds.

**ANNUALS.**—The selection of the commoner annuals for flower garden work depends greatly, I may say entirely, on the requirements of different places. They are not as a rule very largely used in old established gardens, the beds or outlying borders in which they lived out their brief existence being gradually filled up with perennials. I only grow a few now, and these are either for special places or for a special purpose. For the former trailing *Tropaeolums* and *Convolvulus minor* in variety may be cited as examples of plants suitable for covering quickly bits of rough ground; whilst for rather poor borders on a large or small scale, the three varieties of Malope, crimson, rose and white, and the new Toadflax (*Linaria aurea reticulata*) would be found suitable. The enduring properties of the Malope in a cut state are not, I think, generally known, and are somewhat remarkable considering the rather flimsy appearance of the petals. I was led to note this by seeing some shoots that had been picked from the plants and left on the bench in a shed, dry and hard in the stem, but showing the flowers at the end of four days apparently as fresh as when the shoots were severed from the plant. There are some of the annuals that are very useful, almost indispensable, indeed, for summer cutting, and I always find room for a good batch of these even if they have to monopolise some portion of the kitchen garden borders. *Gaillardias* and *Godetias* are in a cut state among the most enduring annuals, and, it may be added, will flower all the longer if the ground in which they are sown has been well manured and deeply dug. There is no better white-flowering annual than Princess Alice Stock, its branching habit, which enables one to take off individual blooms with quite a nice piece of stem, being a special point in its favour. A good white Aster is Comet, the habit of the flower rendering it more valuable for cutting than the very formal types. In yellow shades the two best annuals are possibly the yellow form of Iceland Poppy and the miniature Sunflower; the latter may be sown early in a little warmth to get it quickly into flower; it will pay for a bit of good ground, and if the flowers are cut fairly hard it will continue to bloom until late in the autumn. If it is proposed to sow Sweet Peas in pots, they should go in towards the end of the month, but I do not think there is much gained by the practice, especially if a spell of cold sets in just as the young plants are turned out in the open. One gets equally good results by sowing outside in February, always provided a piece of ground that has been well manured and trenched is chosen. Varieties of really good Sweet Peas are now so numerous that it is rather difficult to make a selection. For growing in quantity, Mrs. Sankey, Princess Beatrice, Captain of the Blues, and a thoroughly good strain of Invincible Scarlet may be recommended. Of a few newer and more expensive varieties tried last year, I was very pleased with Stanley, Countess of Radnor, Venus, and Mrs. Eckford. Provision must always be made for a good breadth of that indispensable annual Mignonette; it is always thoroughly at home in the decomposed mulch and rather stiff soil to be found in the beds of dwarf Roses, and a sowing may be made here and another on a portion of a north border. This is a chance crop, not of much use, perhaps, in a season like that of 1894, but coming in very useful, given a long spell of hot, dry weather in August and September.

Claremont.

D. BERRILL.

**Iris Kœmpferi.**—I must thank "E. J." and Mr. T. Smith (p. 521) for their notes on the above. I think that in all probability my failure must be attributed to heavy soil. Nursery catalogues are eloquent regarding the copious supply of water necessary, but silent as to soil. Evidently with heavy soil too much water is harmful, and it is better to err in the other direction, viz., that of

dryness. There is no lime in the soil, so that this possible cause is disposed of. I shall substitute leaf-mould, mushroom-bed manure and sand for the present soil and hope for better results.—S. W. F.

### THE GLADWIN.

(*IRIS FETIDISSIMA*.)

**IRISES**, with few exceptions, are mostly grown for the beauty of their flowers. Our common yellow Water Flag, which with the Gladwin re-

got from the flower garden in summer is obtained with the finer dried Grasses, "Everlastings," and the Gladwin. We saw lately a vase filled with Grasses, Gladwin, and the orange-red calyces of the Winter Cherry, more appropriate to the season than forced things from the stove. It is delightful when wandering in a wood to come across a colony of this flower, the plant itself spreading out into a dense tuft, the leaves long, dark green, changing as winter hastens away to a lighter "drier" tone. It may be



*The Gladwin (Iris fetidissima). From a water-colour drawing by Agnes Cook.*

presents the family in Britain, is not the least charming in a lovely race, but the Gladwin represented in the accompanying sketch has no flower beauty. Its value is in its brilliance in the winter months, with the delicate brown capsules burst open to display the rows of orange-red berries enclosed within. One can get a winter picture with a group of the Gladwin, the leafage remaining with the stems and displaying glaucous shades, passing to a light brown at the tips. In the early winter months bunches of its berry-bearing stems are sold in the shops, and as pretty a bouquet as may be

naturalised in open places and should be in the garden proper, one use for it being to clothe a dry bank, whilst even under the shade of trees it is happy. A group of it is worth planting if only for cutting for the winter. We may mention the variegated variety as worth consideration. Variegated plants as a rule are things to avoid, but this is pretty and useful.

**Alstroemerias.**—I observe that my note on the above created a smile, but whether "North Cheshire" was amused at my inability to grow *Alstroemerias* when treated as ordinary border

plants or because they are so rarely seen in gardens, "at least in this county," or because he is so very successful with them, he does not state. "North Cheshire" has the soil for *Alstromerias* which at once accounts for his success. I have just the contrary, as, in fact, most of the gardeners have in this county. I did not say that it was owing to their tenderness that these plants failed to grow in the open border. Neither could I think this to be the case, at least with *aurantiaca*, knowing the depth to which the tubers descend. "North Cheshire" must remember that all the species are not hardy. For instance, *A. chilensis* is of doubtful hardiness; so is *pelegrina*, also *p. alba*; *pulchra* is safer when protected a little. I am able to grow the more tender varieties under the conditions I mentioned in my note of December 15. Even *aurantiaca* does not flourish on these hills under ordinary border treatment. The subsoil is altogether unsuitable for it, being too cold. Of course there are exceptions I have no doubt. Cancn Ellacombe, of Bitton, can grow it in almost any spot in his garden. If "North Cheshire" does not possess or know *pelegrina*, I can strongly recommend it.—THOS. ARNOLD, *The Gardens, Cirencester House.*

**Puschkinia scilloides.**—This lovely Squill-like spring-flowering plant has not taken that place in our spring gardens its merits deserve. Probably the price at which it is sold is to some extent a prohibitive one, as this militates against its being employed in masses, when it can be seen to great advantage. It is so employed at Belvoir in the adornment of the spring garden. At Belvoir, in common with *Chionodoxa* and some others of a like character, the plants seed freely. In the large trial garden the late Mr. Ingram used to grow large patches as a reserve.—R. D.

**Primrose culture.**—When at Belvoir Castle in the spring of 1893 I was much interested in the method adopted by the late Mr. W. Ingram in preparing his plants of coloured Primroses for planting out in the beds in his spring garden. He always had a succession of strong seedlings coming on, and they were planted out on a bed made up of manure and leaves 2½ feet deep, and then covered with rich soil, in which the seedlings were planted. Here they made a vigorous growth, and the advantage was seen in the wealth of bloom given when the plants were transferred to the spring beds. In the case of beds of Primroses and also plantations of *Polyanthuses* this condition of things is well worthy of being imitated. The roots enjoy a bed of manure below; coolness, moisture and food are thus furnished, and reproduced in superb heads of bloom. Some of the choicer varieties of double Primroses could be better grown and kept through the summer if treated in this way.—R. D.

**Verbascum phœniceum.**—You may not think the correction of sufficient importance to allow it a space in your paper, but there can, I think, be no doubt that the description of the plant (engraved on page 519 in your issue, December 22) does not apply to *Verbascum phœniceum*, but to *Verbascum nigrum-album*. The latter is a native of England, and is well described by your correspondent "J. E. N.," and it reproduces itself in endless quantity by seed. *V. phœniceum* comes from Southern Europe and is a hardy perennial. I have long grown both kinds, but during a period of more than fifty years the latter has never ripened seed in my garden, though I am aware it has occasionally, but rarely, done so elsewhere. Neither did I ever meet with a white variety.—J. H. ARCHER-HIND, *South Devon.*

**The weather in West Herts.**—All the last ten days have been unseasonably cold, and on each night the exposed thermometer has shown more or less frost. The coldest day, however, of the present winter was the 7th, when the temperature in the shade at no time exceeded 39°. The coldest night also occurred during the past week, being that preceding the 6th, the exposed thermometer then indicating 15° of frost. At 2 feet

deep the temperature of the ground is now only 5°, and at 1 foot deep only 3° above freezing. These are low readings even for midwinter, but, nevertheless, not as low as those recorded at the same period last year, when the ground at both depths was about 1° colder. Snow has already fallen on six days this month, but on only two of these was the ground completely covered, and then to the average depth of less than 1 inch. The last few Rose blooms of the past season were destroyed by frost during the night preceding the 31st of December, which is fully a month later than the average date for the last Rose in the previous nine years, and later than in any year since 1886, when there was still a bloom to be had on January 6.—E. M., *Berkhamsted.*

ABSURD GARDENING IN CHICAGO.

WE see in Mr. Falconer's very pretty little paper *Gardening*, published in Chicago, a horrible example of carpet gardening, in which large vases, bandaged over with black and white lines, are made to spring up from the ground, and in the middle of all a fearful representation of the globe, belted round with dark lines. This remarkable object—"the crowning feature of the design," as it is styled in the accompanying letterpress—is thus described:—

The globe is 12 feet in diameter and rests on a circular pedestal 12 feet across, that slopes from 2 feet in height at the sides to 3½ feet in the middle. It is planted on the sides with the purple-leaved *Oxalis* and on the top with *Othonna crassifolia*. On the globe the water is represented by *Echeveria secunda glauca*, the continents and islands by the purple *Oxalis*, the equator by yellow, and the meridians by red *Alternanthera*. The globe has been used several years, and sometimes the equator and meridians are made with *Sempervivum tectorum*. The globe, being so large, is made secure in its place by a strong timber running down through the south pole and passing on through the pedestal into the firm earth beneath, like a long, well-set fence post. The pedestal is made in much the same way, except that the upright posts of the frame are set in the ground, and common lath (instead of wire) are nailed on, leaving spaces 1 inch in width. A sufficient space at the top of the globe is left unwired until the soil is packed in up to that point, after that wiring and filling go on little by little until the globe is a solid ball of earth. The soil used is heavy clay loam with a little sand, and it is made very wet and then tamped into position. The vases and all the pedestals are filled in the same way. The equator and meridians are planted, and after being outlined with pegs and string, the continents and oceans are also planted. The planting is done by the aid of a small pointed stick with which holes of a suitable size for the various plants are made in the spaces between the wires, and into each hole, as made, the roots of a plant are dextrously twisted, the soil pressed closely about them, and so on, until "the mighty ocean and the pleasant land" are all simulated in growing things. The plants are set so rarely touch each other, which allows some room for growth, but sometimes they pile themselves up in odd groups that give a somewhat stormy appearance to the ocean, and cruminate the vases in a rather decorative fashion.

The "world" is watered as any carpet plant would be, possibly requiring a little more than the average amount of moisture to make up for the rapid evaporation due to the exposed position. The vases are treated likewise, the water being usually applied, in their case, by means of a garden syringe that is used daily. Watering with a fine rose nozzle on an ordinary hose is, however, not at all injurious to plants in such positions. The blossoms of *Echeverias* are generally kept cut from the plants, although in some cases they are left and prove quite ornamental. After frost ends the out-of-doors flower season the plants are all removed from the globe, vases, pedestals and beds of this design, the soil is worked out of the vases, and they are stored indoors until spring, when they are repaired, refilled and used again wherever needed. The globe, however, is usually left in position, and in spring it also is repaired and refilled.

This is the sort of thing that makes flower gardening ridiculous in the eyes of all educated and artistic people. No human being could find so ugly a thing to draw among natural and artistic things, and the utmost that can be said for such rubbish is, that it may go along with the

minor work of the so-called decorative artist, wall-papern, pastry-cooks, and other folk who call themselves artists while doing mostly ugly things. We regret to see public gardening in America, where there have been such good gardens and parks made by Mr. Olmsted, degraded by a wholly needless and inartistic mode of setting out plants, unnatural and contemptible in every way.

NOTES OF THE WEEK.

**Catalpas and Tulip trees in Yorkshire.**—Can any reader tell me if *Catalpas* and *Tulip trees* would succeed and flower in sheltered positions as far north as the West Riding? I have seen none in this district. Persons whom I have asked about them cannot give me any information.—J. EASTER, *Nostell Priory Gardens.*

**Meconopsis Wallichii.**—I see Mr. Wood says *Meconopsis Wallichii* likes as much sun as it can get. My experience is quite the opposite. It does perfectly here now in total shade; whereas it used to flag in a wet, shady place and lose colour. The only protection wanted is from strong winds, which destroy the foliage.—F. PAGE-ROBERTS, *Scots Rectory.*

**Coreopsis grandiflora.**—Your picture of this is so well done, that no one looking at it would mistake it for *Coreopsis lanceolata*, as many do when seeing it in a cut state. The difference is not in its greater size of bloom, for a well-grown *C. lanceolata* is quite as large, but in its shape and colour, and yet many who know have a difficulty in dividing the two when mixed in a bunch. The foliage of seedlings is very distinct. I find it quite hardy and perennial, but it is better treated as an annual; the flowers are much finer. Seedlings self-sown spring up and grow well in my garden.—F. PAGE-ROBERTS, *Scots Rectory.*

**Almonds fruiting in Ireland.**—Under the above heading a note appeared in a recent number of THE GARDEN. Surely this cannot be of such rare occurrence in a country where flowering and ornamental trees and shrubs, as a rule, do so remarkably well. But is it not more unusual for the Almond to perfect its fruit in this part of Yorkshire? Some fruit I enclose you will see appears to be perfectly ripe and of fair size. The tree on which the fruits were grown was covered with its handsome bloom in early spring, and was a conspicuous object at a considerable distance.—J. EASTER, *Nostell Priory Gardens.*

**What's in a name.**—I am relieved by knowing, on good authority, that the name *Imro-glossa albescens* does not exist in botany. It certainly does not exist in any respectable spoken or written language, for one thing at least which there ought to be in this name is the letter H. The Greek for "a longing desire" is not "imeros," but "himeros." So, too, the Greek compound adjective meaning "strap-leaved" is not "imantophyllum," but "himantophyllum," and it is just as barbarous and execrating to drop the H in this word as it would be to call a Sunflower an *Elianthus*. If it is necessary to coin these terrible yard-long words, let them be coined by scholars, at all events.—G. H. ENGLEHEART.

**Gomphia decora.**—The genus *Gomphia*, although calculated by botanists to contain about four-score species, natives for the most part of South America, is only represented by one species in English stoves that can be described as at all well known. This species is *G. decora*, also known as *G. oliva-formis*. Flowering, as it does, more than once during the year, but rarely missing the two darkest months of winter—November and December—its value is greater than that of many plants which are more grown. It has large, shining, deep green leaves not unlike those of the Cherry Laurel. The flowers are produced in erect racemes measuring 4 inches or more high, and about half as much through. On these racemes the blossoms are closely packed, each one being

about 1 inch across, the five spatulate petals being of a rich bright yellow. The plant is not a fast grower, and does not need the pruning that so many other stove plants do to keep them in proper bounds. It was introduced from Brazil in 1868.—B.

**Chrysanthemum King of Plumea.**—I send you a spray of bloom of *Chrysanthemum King of Plumes*. The plant was in bloom on the 10th of December. The sprays exhibited on the 11th at the Drill Hall were cut from the same plant as those sent. I left one spray to see how long it would remain fresh on the plant, and I leave you to judge as to the value of the flowers for keeping. Cut blooms as a rule keep longer when cut and placed in a sitting-room than on the plants.—ROBT. OWEN, *Maidenhead*.

\* \* A delightfully interesting kind, finely cut and varied in the shape of its petals, evidently very late, and as a decorative plant (as the phrase is now-a-days) would be charming.—ED.

**Rose Mrs. Grant.**—We have sent you a few specimen blooms of our new Rose the Belle Siebrecht (H.T.), which was at first named Mrs. Grant, and exhibited under that name by the raisers, Messrs. Alexander Dickson and Sons, Newtownards, Ireland, from whom we bought the entire stock some two and a half years ago. We have grown this Rose under glass in this country, and find it not only one of the best for forcing, but it also does splendidly out-of-doors here, and has proved perfectly hardy. Dean Hole pronounces the colour a true pink, without any combination colours. It is a free bloomer and a strong grower, not subject to mildew. It promises to be one of the finest Roses for cutting ever offered.—SIEBRECHT AND WADLEY, *New York*.

\* \* Large and handsome buds, but not in sufficiently good condition to enable us to see the true colour. If this Rose was first named Mrs. Grant, and won prizes under that name in England, it is perhaps a pity to change it.—ED.

**Bambusa mitis.**—It may interest the readers of THE GARDEN to see a copy of a record which I made of the growth of a young shoot of *Bambusa mitis*. On Sunday, June 25, 1893, at 7 p.m. the shoot was 3 feet 6 inches out of the ground: on June 26, 10.30 a.m., it had grown 3.2 inches, and at 7 p.m., June 26, 2 inches more. Total for the 24 hours, 5.2 inches. Growth to June 27, 10.30 a.m., 4.2 inches, and June 27, 7 p.m., 2.6 inches. Total for 24 hours, 6.8 inches. Growth to June 28, 10.30 a.m., 3.3 inches, and to June 28, 7 p.m., 1.6 inches. Total for the 24 hours, 4.9 inches. Growth to June 29, 10.30 a.m., 3.3 inches, and to June 29, 7 p.m., 1.75 inches. Total for the 24 hours, 5.05 inches. Growth to June 30, 10.30 a.m., 2.25 inches, and to June 30, 7 p.m., 2.5 inches. Total for the 24 hours, 4.75 inches. Growth to July 1, 10.30 a.m., 3.25 inches, and to July 1, 7 p.m., 2.5 inches. Total for the 24 hours, 5.75 inches. Growth to July 2, 10.30 a.m., 5.2 inches, and to July 2, 7 p.m., 5.85 inches. Total for the 24 hours, 11.05 inches. Total for the 7 days, 43.1 inches. Unfortunately, I was obliged to leave home on July 3, and further measurements were not taken. The circumference of the cane is 4 inches.—E. G. LODER, *Leonardslee, Horsham*.

**The Williams Memorial Fund.**—At a recent meeting of the Williams Memorial trustees it was decided to offer large silver medals at the following shows, to be held during 1895: Newcastle-on-Tyne, for the most meritorious specimen flowering plant; Richmond, for the best collection of vegetables; Crystal Palace autumn fruit show, for the most meritorious collection of fruit; Trentham, for the most meritorious collection of fruit. A sum of two guineas was also voted to the fund being raised for the benefit of the Lindley Library.

**Royal Horticultural Society.**—The next meeting of the R.H.S. will be held in the Drill Hall, James Street, Victoria Street, Westminster, on Tuesday, January 15. The new committees will assemble at 12 o'clock noon precisely.

## PUBLIC GARDENS.

**Bournemouth pleasure grounds.**—At a recent meeting of the Bournemouth Town Council the Mayor read a letter from Sir George Meyrick's solicitors, in which it was stated that Sir George would be willing to hand over the cliffs to the borough as pleasure grounds provided the question of an undercliff drive was finally settled, including the approval of plans and estimates showing the scheme to be feasible, and further, that he was prepared to contribute to the cost, but to what extent would depend very much upon what the cost of the scheme would be. The cost has been estimated at from £60,000 to £100,000.

**Metropolitan Public Gardens Association.**—At the monthly meeting of the Metropolitan Public Gardens Association, held at 83, Lancaster Gate, Lord Dorchester, vice-chairman, presiding, the Bishop of Southwark was elected a vice-chairman. A draft of the twelfth annual report was laid on the table and adopted, together with the audited statement of accounts for the year 1894, showing an income of £4300, against £6600 in 1893, and an expenditure reaching £5400, necessitating a considerable call upon the reserve fund to make good the deficit. It was announced that grants of £20 and £10 10s. had been received from the Grocers and Salters' Companies, and that a lady had sent £25 for a drinking fountain; that trees had been planted at the suggestion of the Association in Exhibition Road, and that the Association was in negotiation for the purchase of a site for a playground in Deptford. It was agreed to give £160 and seats towards the laying out of Bartholomew Square, to make inquiries about a site in Hornsey Road offered to the Association, to communicate with the Commons Preservation Society respecting the alleged threatened enclosure of Ham Common, and to lay out the eastern end of the churchyard of All Hallows, London Wall, if the rector would maintain it as a public garden. Letters were read respecting many schemes on hand, and it was announced that the New River Company declined to allow their ground in Canonbury to be thrown open, that the London County Council was no longer prepared to purchase a site in Flower and Dean Street, a small portion of which had been built on, and that the residents in Munster Square and Clarence Gardens and the promoters of the Gliddon Recreation Ground declined to entertain the proposals of the Association for the opening of these enclosures.

**The Yorkshire Gala.**—The thirty-seventh annual meeting of the guarantors and life members of the Grand Yorkshire Gala was lately held at Harker's York Hotel. The chairman, Alderman Sir Joseph Terry, J.P., presided, and there was a large attendance of members. The chairman congratulated those present on having again met under encouraging auspices, and proposed the election of the Mayor (Mr. Alderman W. McKay) as president for the present year. Mr. Councillor Border seconded, and the proposition was unanimously carried. Mr. Alderman Milward then proposed the re-election of Sir Joseph Terry as chairman. Mr. M. Cooper seconded the proposition, which was unanimously carried. Mr. Joseph Wilkinson was re-elected treasurer and Mr. Chas. W. Simmons was unanimously re-elected secretary. The floral, financial and entertainment committees were elected, and the following grants were made: For prizes to the floral exhibition, £600; for music, £120; for fireworks, £100; for balloon, £60; and for amusements, £175. The amounts are similar to those of last year, with the exception of the last, which is increased.

**Sciadopitys verticillata** (the Umbrella Pine of Japan).—I have often wondered why this distinct and handsome conifer has not been planted more extensively, considering that it has now been introduced close on thirty years. Possibly it has been planted in too dry positions; if so, this one fact alone would be sufficient to account for

failure. Like many other of the Coniferae, it delights in moisture at the roots. I well remember a fine plant several years ago in a well-known Surrey garden. This was planted on rather elevated, but moist, swampy ground where *Rhododendrons* grew most luxuriantly. Here the Umbrella Pine was quite at home. The position, it should be stated, faced east, thus of its hardness there could be little doubt. In the Lake districts and in North Wales also it should find a congenial home, note having been taken of how surprisingly well most of the choicest of the Coniferae thrive in these localities. Its close bushy growth and pyramidal outline are decidedly distinct.—G.

**"The English Flower Garden"** (A. T.).—This is being revised and reprinted, and will be issued in the spring. There are some advantages in delay, inasmuch as the book, not being stereotyped, admits of revision. The new edition will contain an account of the Bamboos, by Mr. A. B. Freeman-Mitford, and a revision of the hardy Water Lilies by Mons. Latour-Marliac, the Narcissi by Mr. Burbidge, the Lilies by Dr. Wallace, out-door Chrysanthemums by Mr. Molyneux, Tea Roses by Mr. Herrington, and many other additions. The first part, *i.e.*, that devoted to design, will have important additions and plans of showing planting of flowers as well as plan to scale.

**"The Garden" Index to the second 20 vols.**—Several friends having expressed a wish that an index of the second twenty volumes of THE GARDEN should be compiled and printed as a separate volume, we shall be happy to undertake its preparation if one hundred subscribers will put down their names for it. Without this we could not undertake it, as the labour of preparing and printing would be so heavy. The name of each subscriber would be printed in the volume. The price to subscribers will be one guinea, which will be increased on the day of publication. The following names have come to hand:—

*Mrs. Robb, 42, Rutland Gate, S.W.*  
*Mr. A. B. Freeman-Mitford, Batsford Park, Gloucester.*  
*Mr. W. E. Gumbleton, Belyroce, Queenstown, Co. Cork.*  
*Mr. E. H. Woodall, St. Nicholas House, Scarborough.*  
*Mr. Granville Ryder, 60, Ennismore Gardens, S.W.*  
*Mr. J. F. Bennet-Poë, 29, Ashley Place, S.W.*  
*Mr. Greenwood Pim, Dublin.*  
*Baron Von St. Paul, Silesia.*  
*Miss Hals, Shipley House, Carshalton.*  
*Mr. D. T. Fish, Bury St. Edmunds.*  
*Mr. W. Brockbank, Manchester.*  
*Mr. T. H. Archer-Hind, Norton Abbot.*  
*Mr. G. Muirhead, Hadido House, Aberdeen.*  
*Mr. F. W. Moore, Royal Botanic Gardens, Glasnevin (2 copies).*

## TRADE NOTES.

**Forestry honours.**—The "honours diploma" for the science and practice of forestry has been granted to Mr. James William Watt, eldest son of Mr. James Watt, by the Grand Ducal Forestry College at Eisenach, in the duchy of Saxe-Weimar, in which Government Academy of Forestry he has been studying. He will henceforth be associated with his father, the head of the seed and nursery firm of Messrs. Little and Ballantyne, Carlisle.

## BOOKS RECEIVED.

"The Rosarian's Year-book for 1895." By the Rev. H. H. D'Ombraim. Bearose and Sons, Old Bailey, E.C.

"Guide Élémentaire de Multiplication des Végétaux." With 85 illustrations. S. Mottet. Octave Doin, Paris.

**Names of plants.**—Edward Ingram.—*Cypripedium Dautliieri*.

**Names of fruit.**—Dunham Massey.—Pears: 1, *Bearré d'Arenberg*; 2, not recognised; Apple, specimen too poor.



No. 1209. SATURDAY, January 19, 1895. Vol. XLVII.

"This is an Art  
Which does mend Nature: change it rather; but  
THE ART ITSELF IS NATURE."—*Shakespeare.*

## ORCHARD AND FRUIT GARDEN.

### GRAPES WITH ORNAMENTAL FOLIAGE.

THERE appears to be an increased demand for Vine leaves with beautiful tints during the early winter months, not only for dishing up dessert, but also for table decoration, and for dishing white Grapes or any other fruit that is pale in colour nothing sets it off to such advantage as finely marked Vine leaves, the red in them showing up the fruit beautifully and far better than is possible with green foliage by lamp-light. My ideas may perhaps be considered not up to date in preferring green leaves for dishing up black Grapes or any other fruit that is dark or red in colour, but my contention is that the green leaves form a better contrast than those that are strongly marked with red, which is too closely allied to the black or red in the fruit to show up in the best form. Again, unless the table is very large, I think Vine leaves, although splendidly coloured, have a somewhat heavy effect, and are neither so pretty nor effective as something smaller and lighter. However, in many gardens it does not signify much what the gardener may consider pretty or otherwise; he must do his best to try and meet the wishes of his employers, and whatever they require done, strive to do it well and thus give satisfaction. Some ladies and gentlemen have been so delighted with the use of coloured Vine leaves for the purposes named, that a good price has been paid for such foliage, and in one instance a gardener had trouble because he could not produce the same. Fortunately, evidence was brought forward to prove that soil and its constituents exercise an influence on the colouring, and also that certain varieties will produce lovely leaves in the autumn, while others fail to do so in spite of all efforts. Out of many varieties of Grapes grown in various parts and on different soils, I never found any sort that would equal West's St. Peter's for handsome foliage in the autumn. The red in the leaves is deeper and freely produced in both large and small ones. All gardeners who are anxious to have plenty of such foliage should make room for this variety in one of the late vineries, as it is a late Grape of good quality when well grown. On our sandy soil Gros Guillaume always colours well, the red running in lines up the ribs of the leaf, but I do not consider this Grape worth its room, as the flavour is at best only indifferent. It is scarcely fit to be compared to West's St. Peter's in either fruit or foliage. Black Alicante produces a large percentage of handsome foliage, not so deeply marked with red as the preceding, but covered with small blotches of red. Of late years these markings have been more pronounced, which I attribute to increased applications of potash. The same effect has been observed in Gros Colman, but why it is so much more apparent in some Vines than others by their side is a question that I cannot fathom. Another grand variety with beautiful light red foliage in a late house is Madresfield Court, every leaf being more or less tinted. As previously stated, the soil may have something to do with the colouring, especially as regards one or two of the last named, and manuring with chemical compounds may also bear on the matter, but if I had to plant a Vine

to produce both good fruit and foliage for decoration, I should rely on West's St. Peter's with a certainty of its answering expectations.

W. G. C.

### SHOULD VINE RODS BE SCRAPED?

VERY many gardeners would unhesitatingly answer this question in the negative, and so should I not so very long ago. Now, if asked the question, a more cautious reply would be given: in fact, the answer would be, It all depends upon circumstances. Personally, I have never advocated hard scraping, nor any extreme measure of the kind, but, on the contrary, have favoured the practice of reserving as much of Nature's covering as possible, without, however, going to the length of wholly avoiding touching the bark. It has been my misfortune to have mealy bug to contend with. In order to get rid of this disgusting pest I have been obliged to remove much of the loose bark and scaly pieces about the joints of Vine rods, or otherwise no amount of scrubbing with hot soapy water and no insecticide strong enough to destroy bug or its progeny would be of any avail. That, however, was very different from skinning and scraping the rods, the knife in some cases actually cutting into the inner layer. This, accompanied by addressing of some home-made mixture, or worse still petroleum in some form, is almost certain to have a paralysing effect upon the Vines, the rods breaking badly and also failing to make any further real progress. These much-skinned rods seem to shrink with age, and shanking of berries is only one of the evils attending this extreme practice. One set of rods that came under my care had been thus badly treated years before I saw them, and they had never formed any fresh layers of protecting bark, nor had they attained to half the dimensions they ought to have reached at their age. Nothing short of a complete change of rods, young ones taking the place of the old ones, proved of any avail against shanking, and in about six years the former were as large as the old ones, the age of which no one could determine. In a neighbouring garden the Vines stood out in strong contrast to these. Such extraordinary stems and rods of the same age were rarely if ever seen, and the gardener in charge was very proud of them and their produce, as well he might be. Much of the vigour and grand appearance of the rods was attributed to the fact that they had never been skinned nor even cleaned in any way, the bark actually hanging loosely at places, and being of an extraordinary thickness generally. That gardener would have laughed derisively had I or anyone else insisted that the time might come when even he would find it necessary to clear his rods of much of the outer or old bark, or otherwise fail to produce high-class Grapes in quantity. Yet that time has come, though not in the case of the Vines already alluded to or in the same garden. In the fresh locality the position was much hotter, the soil much lighter, and the trees in the open generally were usually more infested with insect pests than is the case in cooler localities. Red spider soon proved a great scourge, and in spite of sponging the leaves repeatedly, sulphuring the hot-water pipes, changing the surface soil, and frequently drenching the borders, this pest gradually gained the upper hand, the first broods appearing almost simultaneously with the young leaves. After vainly contending against this tenacious enemy, my friend has been obliged to change his ideas and practices with regard to cleaning the stems and rods. Last year they were skinned moderately hard and red spider removed wholesale with the bark, this being followed with a dressing of Gishurst compound mixed with clayey water. It was hoped that enough had been done to get rid of, or at any rate to check the attacks of red spider, but the remedy was only partial. This winter the bark has been taken off still more closely and red spider again found hidden in shoals, and those Vines are actually and of necessity being scraped very hard with a view to clearing out every pos-

sible lurking place. Scrubbing with hot soapy water and a dressing in which flowers of sulphur is freely used follow upon the cleaning, while lay is being very freely added to the border with a view to rendering this far more retentive of moisture than formerly. A more striking instance of the necessity for a change of front I never met with, and, to my friend's credit, he makes no attempt to excuse himself for having at one time held to the opinion and preached the doctrine of the wisdom of letting Nature have its proper course. So long as leaving the whole of the bark on the rods is not the means of creating trouble in the shape of insect attack, by all means let the natural covering of the rods alone; but when the day comes that the bark must be sacrificed, or else the value of the crops will be very greatly lessened, there should be no hesitation as to which course to pursue. It does not matter much if the rods do in time fail to do their work properly, as they are very easily replaced by young ones, and the change may be advantageous in various ways.

W. L.

### NOTES ON PEARS.

IT would be well if more readers of THE GARDEN would do as "Southron" has done, and give some account of the ripening of the different varieties of Pears, &c., from walls, pyramids, and other positions. "Southron's" lot is evidently cast in some favourable position in the southern districts of England. A gardener in Kent, Surrey, Essex, Sussex, &c., has altogether a very great advantage over those placed in more northern districts. In Essex at least, near Ilford, about seven or eight miles east of London, I was much favoured last year. For instance, during the severe visitation of frost in May, when some gardeners in Surrey and Kent had to contend with 10 to 12 of frost, I had 1° only; consequently no blossoms were touched, nor any leaves injured. I fancy the thorough drainage and good cultivation of the land upon which the trees are planted have something to do with their liability to suffer from the effects of frost, and even to a greater extent in improving the quality of the fruit. To what extent good cultivation might influence the time of ripening of the fruit I am not prepared to say. I can confirm to some extent the experience of "Southron" as to the effect of wall culture on some Pears. I grow that best of all Pears, Doyenné du Comice, planted out in the open garden, and also planted against a wall with a southern aspect. The pyramid trees in the open are grafted on the Quince, the wall trees on the Pear stock. The wall trees produce very much larger fruit, but, what is remarkable, it was later in ripening and not nearly equal in flavour to the smaller fruit gathered in the open garden. Josephine de Malines I have never grown on the wall, but have obtained splendid fruit from pot trees grown in the orchard house. It is also grown on the Quince as a pyramid in the open garden. The trees bore rather too much fruit this year; consequently it was neither large nor first-rate as regards quality. The fruit ripened early for that variety, as I had not a single fruit left at Christmas which was not decayed at the centre. I gave up the culture of Beurré Rance even when double grafted, as recommended by a famous fruit grower, the fruit never being good enough. Beurré d'Arenberg is a free-bearing Pear of medium size; I rather like it as a pyramid on the Quince. This season it ripened as Beurré Superfin and Doyenné du Comice went out, and it does not seem decay at the core like some others. I like Pitmaston Duchess to last as long as possible. There is nothing to boast about as regards flavour, but the fruit is juicy and of fair quality. I have been informed that it is one of the most profitable Pears for market.

It is certainly not more than second-rate for flavour, but the large size of the fruit, the noble appearance of the trees when in full bearing, and the almost certain prospects of a crop annually tell in its favour. It does best on the Pear stock. I pick the fruit at three different periods and at intervals of about ten days. Brockworth Park as a pyramid on the Pear stock has done good service for the past fifteen years; it has also the merit of producing large handsome fruit. Louise Bonne of Jersey does not seem to hold the high position it did twenty-five years ago, when Mr. G. F. Wilson used to produce such splendid specimens from his pot trees. It does best at any rate on free soil when worked on the Quince, but I find even on medium clay soils the trees make but poor growths on the Quince, and if the soil is clayey, certainly they ought to be on the free stock. *Beurré Hardy* and *Beurré d'Amanlis* have gradually lost their popularity; in fact, any Pears ripening with *Beurré Superfin* and *Doyenné du Comice* are at a great disadvantage. *Williams' Bon Chrétien* is best as a pyramid on the Quince; it is not worth a wall, but it will ever be grown for its earliness, and the flavour is fairly good if the fruit is not allowed to hang too long upon the trees. I am not sure whether *Uvedale's St. Germain* and *Catillac* are the best kitchen Pears; *Verulam* is a better cooking Pear than either. *Bellissime d'Hiver* is a good cooking Pear. *Directeur Alphan* I bought when it first came out, expecting it to be a good late Pear, ripening in March, but it has never yet come in for dessert, although an excellent kind for cooking.

I have but little experience of the newer Pears. Conference and others of the English-raised varieties seem to have been sufficiently tested, and it would be interesting to know how they have done in different soils and various districts. I notice another variety alluded to at p. 2 which certainly ought to be in every collection—*Marie Louise*, but I have never been able to obtain good fruits from trees in the open garden, but wall fruit is always excellent. The best *Jargonelles* this year, or indeed in any season, I obtained from a wall with a northern aspect. The fruit from standard trees is of small size, but of very good quality. *Jargonelle* when grown on a wall in the south-eastern districts of Scotland surpasses all Pears.

As to the reason why certain Pears are inferior one season and of good quality the next, something, perhaps a great deal, depends upon the season, but something also on the culture. Some persons cannot be induced to drain the ground as it ought to be, nor can they see the value of trenching some soils or bastard trenching others. When the ground is waterlogged for four or five months of the year the temperature is lowered to a greater extent than some people are aware of. Draining raises the temperature and aerates the soil. Another great point in culture is to encourage the roots to come near the surface by summer mulchings and working the hoe well over the roots early in the year. It has been proved that the variation of temperature in the soil is from 61° in summer 6 inches below the surface to 44° at the depth of 3 feet; between these temperatures it was 57° at 9 inches and 50° at 18 inches deep. We can cure canker by draining the soil and raising the roots up to this surface warmth, as I proved over and over again when all superficial remedies had failed. Fungoid growths of various kinds may often be traced to undrained soils and bad cultivation. A healthy tree is not so likely to suffer as one which has become enfeebled by bad culture, and when disease appears upon the leaves or

fruits superficial remedies are applied, while the root of the evil is untouched. Another evil to be avoided by those who would have healthy trees and good fruit is not to purchase badly cultivated trees to begin with. Many persons go to the dealer who will sell for least money, and the inexperienced amateur is often deceived by the appearance of the trees, which may have made plenty of strong shoots owing to their growing too long in one position. When such trees are lifted, or rather torn out of the ground, there are scarcely any fibrous roots, and the thick main roots are usually torn and broken badly. Many of such trees die, and those that live take years to recover, so that this supposed economy of buying in the cheapest market proves to be the most expensive in the end. My advice is, purchase the best trees to begin with; see that a good foundation is laid by well preparing the ground; plant the trees well, and attend to their subsequent culture through the summer months. J. DOUGLAS.

**Lady Downe's Seedling Grape.**—I was glad to see Mr. Douglas (p. 1) recommending this excellent Grape. Owing to its modest appearance as compared with more showy varieties, it is not so much planted as its merits deserve. As a market Grape it is not to be compared with *Gros Colman*, but in private gardens the latter ought not to find a place. Lady Downe's will produce the size of bunch specially adapted for dessert, with a crispness and flavour all its own, and particularly agreeable to the palate. I think the tide of opinion is beginning to turn in favour of higher quality in fruit, as demands have been very good this season for Grapes of good flavour.—W. G. C.

**Melons.**—The small green and scarlet-fleshed Melons mainly grown in this country are all very well in their way, but they are a costly luxury, and only suitable for large gardens where all the appliances are first-rate. In small places, if the fruit can be raised at all, the family may get a mouthful of it at a cost of a pound or so. The large field Melons of the south of France are grown with the help of hotbeds right up to the neighbourhood of Boulogne. These large fruits would surely be much more satisfactory and give a better and more appreciative return in ordinary gardens in this country. The fruit may not be so delicate in flavour as our choicest tender kinds, but it is nevertheless delicious when ripe, and a family can make a meal of one if so disposed. Any one who can grow Cucumbers could apparently grow these Melons. Failing a supply of the seeds from our usual seedsmen, a stock can be easily got by buying a Melon.—J. I. R.

**Apple Barnack Beauty.**—The question is frequently asked why fruit growers, especially those who grow for market, do not plant more late Apples which they could sell at satisfactory prices. In the future I believe that more late varieties of Apples will be planted, as so many growers have planted comparatively early sorts, that when they attain a sufficient size to bear good crops the markets will be glutted, and only those men who grow the finest fruit and carefully pack it will be able to obtain high prices, and even those will be lowered by the mass of Apples put on the market. An Apple that I feel sure will prove a favourite with planters in the future is *Barnack Beauty*; the fruit is of nice size, beautifully coloured on the sunny side, heavy and firm, and will keep perfectly sound into May or later if the seasons have been favourable for well ripening. Even in a season like the past one, in which Apples have kept very badly, some varieties rotting in a wholesale manner, scarcely a fruit of the above has decayed. I have not grown *Barnack Beauty* yet as a standard, but I believe it would answer admirably, as the growth is strong, short-jointed, and upright. As a bush tree it is all that could be desired both on the Crab and Paradise stocks, and commences to crop freely the

second year after planting, being as free as *Lane's Prince Albert* in that respect on our light soil. Its upright growth renders it very suitable for growing in bush form, as it does not require so much room as those more diffuse in habit. The trees if planted at 9 feet apart each way will not become crowded for a number of years if properly pruned and otherwise carefully attended to. This Apple is not only likely to prove an acquisition to market men, but also to private gardeners, who generally have none too many varieties that will keep up the supply late in the spring. That able fruit grower, Mr. Woodward, of Barham Court Gardens, has a very high opinion of *Barnack Beauty*, as it does remarkably well with him in Kent as well as with me in Herefordshire.—G. C. R.

**Mistakes in gardening.**—Mr. Douglas probably has good cause for asserting (January 5, p. 2) that an over-dry condition of the soil "is a fertile source of cracking in Grapes." Possibly he may at some time have had an unpleasant experience similar to that recorded by me. We may, however, be consoled by the fact that the most skilful gardeners are liable to err. Here is a case in point. One of the most noted London market growers had about 1000 Fuchsias coming on for early bloom. Wishing to get them along quickly, he ordered the man in charge to give them a top-dressing of artificial manure. The man thought the plants were hardly forward enough to take it, but was over-ruled by his employer. The result was most disastrous, and instead of these plants being worth 12s. per dozen, they were not worth so many pence. This was a grave error, and one which Mr. Douglas would probably say no good gardener would have committed. I should, however, be sorry to make such an assertion, for no more than "one swallow does not make a summer" does one failure make a man a bad gardener.—J. C. B.

#### UNFRUITFUL TREES.

If the greater portion of fruit trees grown in this country only produced half a crop annually, there would be nearly or quite enough to meet all our requirements, while if they actually bore full crops in years of plenty, then there would be great gluts and much wasted fruit. As it happens, there are great numbers of trees that do not by any chance bear a good crop, and not a few might be termed positively barren. In some instances this unfruitfulness is traceable to faulty treatment of either the branches or roots, but in others it is very difficult to determine what is wrong. More often than not, however, it may be attributed to the worn-out state of both the trees and the borders, and, according to what I have seen lately, it is in town and suburban gardens where this is most apparent. Those in charge cannot, as a rule, be accused of neglecting the trees, but their efforts have been ill-directed. They commence by allowing the trees to assume all manner of forms, while the laterals or spurs are rarely shortened back hard enough for the walls to afford an appreciable amount of warmth or protection. Instead of the spurs standing out from 6 inches to 12 inches from the walls, they ought really to be almost close up to them, or say not more than 3 inches away. Those long, ugly spurs on Apricots, Plums, and Pears rarely produce fruit freely, or if they do, the quality is never what it ought to be. If fruit can be grown 'as well or, perhaps, better in the open than on the so-called wall trees, why go to the great expense of constructing garden walls? The latter are certainly of service, inasmuch as they shut out all intruders, but as good vegetables can be grown without their aid as with. The same, however, cannot be said of fruit, as that grown on properly managed trees against walls will always surpass any of the same kind

or variety grown quite in the open. The most ought then to be made of every inch of wall space. Instead of keeping trees year after year in the hope they will eventually produce remunerative crops of fruit, but which never come, the better plan would be to root a few of them out every season, their places being filled with young trees of varieties of known all-round excellence. Exceptions may be made in favour of trees that are constantly growing most vigorously, as the chances are these may soon receive a check sufficient to bring them into a more productive state, or this can also be effected by root-pruning. Giving a tree its head, that is to say, allowing the branches a far greater spread than formerly, and, in particular, avoiding shortening the leading growths, is a good way out of the difficulty; but too often walls surrounding small gardens are less than 10 feet high, and the trees have to be pruned harder than is good for them accordingly. Whoever saw a tree of Jargonelle Pear cropping freely against a low wall? To see this delicious variety at its best the tree must have plenty of head room, the front or sunny end of a dwelling-house suiting it admirably. Other varieties of Pears, and also Plums, generally succeed remarkably well under similar conditions, a freely-grown, irregular fan-shaped Plum tree frequently producing enormous crops of fine fruit. Let the trees then cover as much wall space as possible, but do not allow them to form heads above a wall, as these soon rob all the rest of the tree of their share of food supply, and much impoverished branches never yet produced good crops of fruit. Excessive vigour must not be met by light pruning, as far as the lateral shoots are concerned, spurring these back to within 1 inch or so of their starting point being imperative for reasons already given, and the remedy (root-pruning) has also been alluded to. When, however, the trees are unproductive, owing to their weakly impoverished condition, something ought to be done in the way of restoring them to a more vigorous habit of growth. In many instances (I am still thinking of town, suburban and other small gardens) the trees, or others before them, have so long occupied the same site without any attempt being made to restore any portion of the fertility the roots have drawn out of the soil, that it is nothing to be surprised at if the occupants simply dwindle away, for that is what it amounts to, thousands of trees being at the present time in a half-dead state. What is wanted is a thorough change of soil, and if fresh fibrous loam or the best portion of the top spit of good pasture land could be had, with perhaps some charred soil and mortar rubbish added, nothing would better suit the trees. Unfortunately, very few gardeners in charge of small places can get enough of this for their Vines and potting even, and supplying it to the ordinary wall trees is out of the question. The next best thing would be the substitution of good kitchen garden soil, or any in which few or no tree roots are found for the old border soil. It is not merely the surface soil that should be used, but in many cases the addition of the next 3 inches of that underneath would greatly improve the mass. Naturally, soils vary largely in their composition, not a little depending upon the way they have been treated during the past few years. According to my experience, small gardens are rarely trenched, and, in fact, many of them are only very slightly dug. Then, again, lime is strange to most of them, and its use at the rate of one half-bushel to the rod has been known to work wonders where used for the first time within the memory of those in charge. The mixture of lime, or, better still, mortar

rubbish freely, as well as of good subsoil, is most desirable for fruit trees, while if the soil is naturally poor some good solid manure may be added, and pulverised clay would greatly improve the character of the lighter or non-retentive soils. All this is suggested with a view to showing that it is possible for energetic men to grow fruit without so many loads of fresh loam for their borders. The latter is desirable, but not indispensable. Where young trees take the place of old ones, they ought to have wholly fresh soil, or compost as suggested, to root in, and not merely a small quantity; while if older trees are to be resuscitated, a good-sized trench should be opened in front of them at a distance of 4 feet or rather more from the stems, some of the roots traced out to nearer the trees, these latter pruned and then relaid, and the trench refilled with fresh compost. Some of the surface soil ought also to be forked away till the roots are found, and this also be replaced with fresh soil. Not much alteration for the better would be apparent during the first season following upon root "doctoring," but the fresh soil would be promoting and sustaining the spread of roots and the formation of root-fibres, and this would not go on long without a corresponding improvement in the top growth and productiveness of the trees. Much in many cases might be done by baring the top roots to a distance of 4 feet from the walls, surfacing heavily with good half-decayed manure and covering this with soil. I have known this greatly benefit Pear trees that previously had failed repeatedly to produce presentable fruit. Watering during the winter whenever there is no frost in the ground with strong liquid manure, such as the drainings from farmyards, stables, and piggeries, only diluting where little water runs into the cesspools, is a very simple and inexpensive way of enriching a border, and cottagers whom I have induced to try this remedy for starved, unproductive trees have had good reasons for being grateful for the suggestion. Unfruitful

TREES IN THE OPEN

are also far too plentiful. Espalier-trained and cordons may be treated much as advised in the case of trees against walls, not a few of the former proving little better than cumberers of the ground. Some of them are suffering from lack of food at the roots, but the great majority are either deriving more than they require from ground about them that has been heavily manured for vegetables, or else are being driven to root deeply, owing to a reckless use of the spade close up to the stems, excessive top-growth being the consequence in either case. Root-lifting and pruning and more rational treatment afterwards are the remedies for this state of affairs. Cordons badly managed are the least productive of all trees at any rate they produce little else than rank growth. Unless these are lifted and root-pruned every second or third year they cannot often be kept from forming too much wood, and in numerous instances might well have their trained branches cut away and the strong central growths allowed to grow naturally and freely, productive bushes or pyramids resulting in the course of three or four years. Those standards, pyramids and bushes that fail to bear fruit owing to their excessively vigorous growth ought for the next two or three seasons to be much more lightly pruned than formerly, those in charge contenting themselves with thinning out young growths where crowded, leaving those best placed to their full length. If shortened, however lightly, little else but wood-growth at the ends will result; whereas if left to their full length there

is every likelihood of fruit-buds forming along their entire length. Those standards, pyramids and bushes that fail to bear satisfactorily, owing to their stunted state, should be assisted at the roots, much as advised in the case of starvelings against walls, liquid manure in particular being desirable for any too large to be easily partially lifted and given a liberal supply of fresh compost at the roots. Chemical manures wash down readily into and are absorbed by cultivated ground, and a dressing of 2½ lbs. of superphosphate of lime mixed with 1½ lbs. of nitrate of soda to every square rod of ground occupied by the fruit tree roots would soon benefit the trees, greatly improving the quality of what fruit does form and promoting more vigorous wood growth. It is the latter that is required to put new life into old trees, and if a good sprinkling of shoots can be forced out of any that have previously failed to grow satisfactorily, this will be found a step in the right direction. Either leave such shoots to their full length or else (in the case of trained trees) cut away about one-half. Eventually these young branches should take the place of some of the worn-out older ones. SELWOOD.

**Dry fruit borders.**—I have this season had occasion to lift a number of young fruit trees planted four years ago, and was surprised to find the soil at 2 feet from the surface quite dry. Doubtless the drought of 1893 in many soils caused a lot of dropping of fruit last season, also small fruit. In my case there was a heavy mulch of decayed manure, the trees were well watered twice a week, and yet the soil was dust-dry. I admit the border was sloping and the trees vigorous, being cordon Pears, but one would scarcely think after the excessive rainfall last year such a state of things would exist. I noted the failure of some large Morello Cherries last season. There was plenty of fruit, but it was very small. On removing the soil between the trees it was equally dry. These trees are at the back of fruit houses and not watered much, being on a north wall, but even here the rainfall had not got under the large mass of fibrous roots.—G. W.

**Flavour in Pears.**—I was much interested in the observations of "Southron" (p. 2) on the premature ripening and flavour of Pears. Although not an advocate for planting any variety of Pear away from the influence of walls, I quite agree that the flavour of many varieties is much improved by growing the trees in the open. Bauré Rance and Josephine de Malines, if grown in the open, never get beyond the tough stage; grown on a western aspect they are not much better. Such early varieties, however, as Williams' Bon Chrétien, Bauré d'Amanlis, Mme. Treve, and Louise Bonne of Jersey are decidedly better in flavour when grown in the open, a freer circulation of air and more direct sunshine reaching the fruits. Such varieties as I have named, on account of their earliness, are very often planted against walls with an eastern aspect. The trees crop freely, and the fruit also grows to a good size, but this is no criterion that the flavour is equally satisfactory. Marie Louise with me is too tender for growing in the open, as also is Bauré Supertin. Not a mile away the varieties named succeed admirably, but the soil, overlying the old red sandstone, is much warmer and lighter, the position also being lower.—Y. A. H.

**Hunt's Tawny Nectarine.**—I think it would be difficult to find a better Nectarine for early forcing than this old variety. True, it is not so large as many, but it is a never-failing cropper and possesses a hardy constitution. I have heard it said that it is liable to mildew, but I have never found this to be the case. The flavour is average, the flesh yellow, and the outward appearance similar to that of Humboldt and Pine-apple. There is a tree at Guntton which has been forced for many years. D. T. Fish referred to it in THE GARDEN some years ago, and in spite of the intro-

duction of so many newer and larger varieties. Hunt's Tawny is still retained. Were I furnishing an early house of Peaches and Nectarines I should certainly include Hunt's Tawny.—J. C.

**Peach Desse Tardive.**—My experience of this is that it is a very uncertain variety, although large and, for a late Peach, of good flavour. It is not altogether a new Peach, as I first saw it some twenty years ago in the gardens at Coombe Lodge, Winkley, Essex. It grew on a back wall of a lean-to house and produced fruit in plenty, of enormous size and extra good appearance. Since then I have seen it in various places, but never in a satisfactory condition. It is grown at Gunton and Bickling, but does not, I think, crop well. I had a healthy tree under glass for five years, but have now rooted it up.—C. H. N.

#### NOTES ON GRAPES.

THE leading article by Mr. J. Douglas on p. 1 (Jan. 5) will have been read with interest by those who have to produce Grapes for home consumption or the market, and few, if any, will be found to differ from his opinion respecting quality and appearance as affecting market and home consumption. I could not help, however, being struck with the decidedly inferior position Alicante holds in his estimation as regards quality and the limited assortment advised for a large establishment, and I venture to think, whether rightly or wrongly, that there are not so many large gardens in which so few are represented as Mr. Douglas advises. If Mrs. Pince could be produced in such perfection as was noticed at the great Crystal Palace fruit show last autumn with the same certainty as Alicante, there would not be any doubt about its value for any purpose, but, most unfortunately, it is seldom seen in such perfection, and it has a decidedly bad reputation among growers generally by reason of its indifferent colour. Mr. Young, of Abberley Hall, is, I believe, among the few who can claim the secret of growing Mrs. Pince Muscat to perfection. I was once shown a photograph of some noble bunches of this Grape grown by Mr. Young, and I remember on being asked what I should consider them to be, remarking that I should suppose them to be good Alicante, such bunches, colour, and berries I had never before seen represented in Mrs. Pince. Those referred to at the Palace show last autumn were, judging from memory, very similar to Mr. Young's, the bunches, berries, and particularly the colour being especially fine. No doubt Mr. Douglas and Mr. Young have both discoursed on the treatment of the Vine in question in THE GARDEN, but to new readers the "secrets" of producing perfect examples would be especially valuable, and possibly to older readers too, for there are without doubt a great many who for some reason or other fail to make a reputation by growing it imperfectly. In its usual "foxy" skin it does not look very tempting in appearance, and where this is so much studied, Alicante as well as Gros Colman displace it. There may be nothing singular in it, but I think it is a fact that gardeners' ideas are moulded very much by the likes and dislikes of their employers, on these two points in particular—appearance and quality—and I cannot help thinking that Mr. Douglas has been in touch with those of very superior taste, because it is clearly apparent that quality has a decidedly prominent tendency in the selection of sorts recommended by him in his notes.

For late keeping, Lady Downe's has no rival, and of its quality I have never heard any complaint. Is it possible for Grapes to vary in quality from one season to another—that is,

when given the same treatment and under good culture? A gardener of Grape-growing fame lately remarked to me that his Lady Downe's were really better this year than he can ever remember them before, and I know his are always first class in every respect. The difference is, perhaps, more a question of fancy than reality, yet at the same time the season and minor differences in the matter of treatment might effect a variation. I am, of course, speaking of the comparison at a corresponding date from one season to another. There is usually a standard from which there is loss or gain in keeping, more or less, but it would be interesting to learn the views of other readers on the point. The garden in which Venn's Muscat originated I know very well, and I have heard the late Mr. Sweeting, its raiser, often speak of the favourable impression it created in its earliest days, but the long house built especially for it has ere this been planted with other and more easily grown varieties, as it developed the same trait as in other gardens—stoneless berries and shanking. Venn's Muscat would appear to be gone almost out of cultivation; seldom is the name mentioned or the variety noticed. There is not much doubt of its identity with Muscat Hamburgh, and that which gained for it its name and former reputation is attributable only to the vigour derived from the seedling stage of life. Large sums were offered the raiser for his stock at the time when it was first exhibited, but it was respectfully declined, he having decided to distribute it himself, and a large structure was built purposely for growing it as a market Grape. In one of Mr. Venn's vineries was a Muscat of Alexandria grafted on a Syrian stock, and although the character of the Muscat was perfect as a natural consequence, the flavour was changed, and resembled that of the Syrian. I tasted berries myself from the Vine in question, and have never met with a similar incident. I saw last year two rods of Muscat of Alexandria. One had been inarched on a Lady Downe's and the other on Gros Maroc, and the difference in the crop was very marked, that on Lady Downe's not being nearly so good as on the other. The object in this case was to convert a house planted with a mixed variety into a Muscat house alone, other Vines being Alicante, Black Hamburgh, and Gros Colman. All these were doing particularly well, but were not in such a forward state in fruit bearing as the two first-named. All the Vines were young and wonderfully vigorous, and it was thus the more remarkable that the Muscat was fruiting so indifferently on the Lady Downe's stock.

WILTSHIRE GARDENER.

#### SHORT NOTES.—FRUIT.

**Peach Dymond.**—The late Mr. Wildsmith spoke highly of this Peach for open-air culture. I, too, think it is one of the best Peaches grown. It succeeds here against a west wall, giving a full crop of large, highly coloured fruit of excellent flavour. I always recommend this Peach now when asked as to the best sorts to plant.—E. M.

**Peach Dr. Hogg.**—I am not much surprised to hear that this Peach forces well. Twenty years since I grew it with much satisfaction, having previously heard it well spoken of by a capable fruit grower. The growth is vigorous, the fruit large and richly coloured. In spite of these points in its favour it is not grown so largely as it deserves.—E. M.

**Apple Lane's Prince Albert.**—I was somewhat surprised to find from the remark of "S. W. F." (p. 23) that this variety is liable to canker. It is the first time I have heard the faintest suspicion of such a thing. Here I grow over 100 trees of this Apple and in strong soil, and still there are no signs of canker. Some constitutional element in the soil seems to point strikingly to the cause of canker in Apple trees.—E. M.

## ORCHIDS.

### POTTING ORCHIDS.

ALTHOUGH there are not many Orchids that require repotting now, the busiest time of the year is not far distant, and a good supply of materials should be got in readiness for the purpose. The plants in baskets, on blocks, and in cylinders should be looked over in order to estimate what number and sizes of these will be required, and these should be procured without delay. A good stock of pots of various sizes should also be washed ready for use, as it is bad management to have to wait for pots when the work of repotting should be in full swing. If new pots are to be used, they should be soaked in water for a day beforehand. Much time will be saved by having the Sphagnum Moss picked over and washed ready for use, a good lot of points being reserved for surfacing. The rougher parts may be kept for covering the drainage and for chopping up, to be mixed with the compost for terrestrial Orchids, as Cypripediums and Calanthes. Some dealers now supply Orchid peat ready for use by having all sand and earthy particles removed. This effects a great saving in labour and also in carriage when it has to be sent a long distance by rail. Although rather higher in price, it is for this reason cheaper than buying peat in turves, unless the residue can be used for Rhododendrons or other rough purposes. Terrestrial Orchids such as named above need a good proportion of loam in the compost, and this should be obtained of as fibrous a character as possible, and have most of the fine soil sifted out in the same manner as the peat. These, with a stock of clean crocks and charcoal broken to various sizes, will be the chief requisites for Orchid potting. Sand I have not mentioned, as I think it very bad for the great majority of Orchids, and one that may easily be dispensed with for any. With regard to the quantity of each material required, this will depend upon the class of Orchids to be potted. For the purpose of this note Orchids may be roughly divided into three groups. The first would be the distichous-leaved plants with upright stems, as Aerides, Saccolabium, and Vandas. None of these show any great liking for peat, but take well to layers of living Sphagnum with charcoal or potsberds freely intermixed to ensure aération and prevent the too rapid decay and consequent souring of the mass. The second—and this constitutes by far the majority of Orchids in general cultivation—is the pseudo-bulbous division of epiphytes, as Cattleyas, Dendrobies, Odontoglots, and a host of others. A mixture of peat and Sphagnum will be the basis of the compost for all these, the quantities of each varying a little according to the habit and liking of the individual species. The third group would consist of terrestrial Orchids and those which, though naturally epiphytal, are found under cultivation to thrive best in a compost similar to that used for the terrestrial group. This, as mentioned above, will consist partly of fibrous loam, with peat and chopped Sphagnum added in varying quantities. From the above an idea may be formed of the proportionate amount of each requisite, and if these are all prepared, together with a few neat stakes and labels during the dull season, the pressure of work later on will be considerably lessened.

H. R.

**Dendrobium Wardianum.**—This well-known Orchid is among the most beautiful and showy now in flower. The Burmese form grows much more strongly than the type, and also appears to flower earlier. [This is known as *D. Wardianum*

Lowi and also as *giganteum*. The flowers of the best varieties are 5 inches across and produced upon the leafless pseudo-bulbs of the previous year's growth in twos and threes, as many as thirty being sometimes produced upon a single stem. In the culture of this species the chief point is to get the growth well ripened as early as possible in autumn and to give the plants a decided period of rest before being introduced again to heat. Large pots are not required, as the more crowded the roots are the better the plants thrive. I remember being very much struck by a plant some years ago grown by Mr. E. S. Cole when gardener at Woodside, Stoke Bishop. This had several pseudo-bulbs at least 1 yard in length, and was growing in a piece of cocoa-nut shell about 2½ inches or 3 inches across, the natural apertures in the shell allowing the surplus water to escape. At this time of the year, when the young growths are appearing at the base of the pseudo-bulbs, great care must be exercised in watering, or the young shoots will damp off wholesale. On dull cold days the plants will be much better without any water, giving a good soaking when the weather is fine and allowing them to get quite dry before being again watered. They must be allowed to grow quite naturally and not be staked or tied in any way, or the beauty of the plants when in flower will be spoilt.—H. R.

**Cypripedium callosum superbum.**—One of the best forms of this fine *Cypripedium* I lately noted in bloom. The flower is borne upon an erect scape about a foot in height, and is well set off by the finely tessellated, deep green foliage. In this variety the dorsal sepal is large and very broad, pure white over two-thirds of its surface, with long and short veins of a rich vinous purple colour. The petals are broad, heavily shaded with purplish rose, and spotted on the upper margins only, with several large blackish warts. The typical form of this species was introduced from Siam ten years ago by M. Regnier, of Paris, and is a decided acquisition. It flowers during the early months of the year, and equals, and in some instances surpasses, in the size and beauty of the dorsal sepal any other kind yet seen.—W.

**Cypripedium Lathamianum** is a very pretty hybrid, raised by Mr. Latham, curator of the Birmingham Botanic Gardens, between *C. Spicerianum* and *C. villosum*. A flower of this is sent by "C. W.," but it appears to me to be a very pale variety, and might be said to be near the *C. Leo* raised by Mr. Lee, and which may be described as a very pale form of this kind. I recently noticed in Messrs. Peed and Sons' nurseries at Tulse Hill a very nice variety, the dark purple line in the upper sepal as well as the central stripe down each petal being very pronounced.—G.

**Oncidium tigrinum** (*W. Macbr.*)—From this correspondent comes a bloom of this Orchid. He says he bought it under the name of *Oncidium Barkeri*, and is disappointed that it has turned out different from his expectations. Both these names are identical, and it is rarely that it is called at the present day *O. Barkeri*, it being too well known by its proper name. This, one of the finest Mexican Orchids we have, was discovered early in the present century and described in 1825 as *O. tigrinum*, but upon its being introduced in a living state about 1840 it received the name of *O. Barkeri* from Dr. Lindley, who did not identify it with the herbarium specimens.—W.

**Lælia anceps.**—From Mr. James Cypher, of the Queen's Road Nurseries, Cheltenham, comes a box containing some beautiful white varieties of *Lælia anceps*. Amongst them the following kinds are decidedly worthy of notice: *L. a. alba*, a flower of fine form, being entirely pure white, excepting the yellow crest on the lip and a few purple lines on the interior of the side lobes; *L. a. Hilliana*, a very distinct form with white sepals and petals, the side lobes of the lip flushed and margined with amethyst-purple, whilst the acute front lobe is bright purple at the tip, and with a large orange-yellow disc. *L. a. Percivaliana* is a very delicate

and pretty kind, the lip being pale rose and the other segments pure white. The best flower in the whole was one unnamed. This measured about 5 inches across and much resembled the rare *L. a. Dawsoni* both in shape and markings. The sepals and petals are of the purest white, the latter very broad; the side lobes of the lip large, beautifully expanded and streaked with purple lines; whilst the front lobe is of a bright rich purple, margined with white. This is one of the finest varieties I have seen. These white forms of this popular *Lælia* are amongst the most beautiful kinds we have, and require a somewhat warmer temperature than the typical and dark-coloured varieties.—H.

**Odontoglossum bictonense.**—It appears rather late in the season for this interesting plant to be in bloom, but some flowers have just come to hand from "C. W." The usual time for this species to bloom is from about September until the end of November. The flowers before me are very small, and I would advise "C. W." not to allow large spikes to remain upon newly-imported plants, as this materially weakens the constitution of the plant and very often kills it. A far better plan is to allow only one or two flowers to develop upon the first spike produced, and as soon as these are fully open, so that the variety may be determined, the spike should be removed. This will enable all the strength to be thrown into the plant, it thus becoming better established before flowering next season. *O. bictonense* is a native of Guatemala, and was first introduced into cultivation just sixty years ago. The flowers, borne upon an erect spike, are yellowish-green, blotched with brown, the lip pale rose. This is the typical form, but many varieties have since appeared, among them being *roseum*, with a deep rose lip, the other segments reddish-brown; *album*, with brownish segments and a clear white lip; and *sulphureum*, with yellow sepals and petals and a white lip.—W.

#### ODONTOGLOSSUM PULCHELLUM.

This pretty species appears to have been scarce for many years after its introduction, which was about fifty-four years ago. It was first discovered by Mr. Ure-Skinner in Guatemala, and deserves a place in every collection. The cultivation of this plant is by no means difficult, as it is found in a wild state at considerable elevation, and will therefore thrive with the other *Odontoglossums* in the cool house. Whilst the plants are in flower, which will be during the present and the next two or three months, it will be found beneficial to remove them to a drier atmosphere, where the blooms will continue longer in perfection. *O. pulchellum* should be potted in fibrous peat and Sphagnum Moss, with good drainage, the plants being well elevated above the rim, and at no time must they be allowed to get dry at the roots. The flowers are borne upon erect scapes, which are longer than the leaves, and the blooms generally number from five to a dozen upon a spike. These are very distinct and very fragrant. The individual flowers appear upside down, that is, the lip is the uppermost portion of the flower. The flowers are pure white, with the exception of the large yellow disc of the lip, where it is finely spotted with reddish crimson. Amongst the importations which have from time to time arrived there have appeared several fine varieties, one being

*O. PULCHELLUM MAJUS*, a decided improvement on the typical form. In this variety the pseudo-bulbs are larger and the plant of more robust growth, the flower-spike also stronger and more thickly set with blooms, which are as large again as in the type. It is also known in our gardens as *O. pulchellum grandiflorum*. During more recent years, however, a still more beautiful variety has appeared, and which is named

*O. PULCHELLUM DORMANIANUM*. This is no doubt the finest form of *O. pulchellum*, a nice specimen of which I recently saw in the collection of the gentleman whose name it bears. The pseudo-bulbs are not so long as in the typical kind and the flowers are much larger, the segments broader even than in the form *majus*.

WM. HUGH GOWER.

**Cattleya speciosissima.**—This fine *Cattleya* belongs to the "labiate" section, and is one of the largest flowering kinds known. It usually produces its blooms during the latter part of the year upon the young growths which may be just completed, and without any decided period of rest; therefore if "W. J. T.'s" plant has not yet shown any signs of flowering he must wait until new bulbs are formed, for it will not bloom from old bulbs. It has been known in our gardens for a number of years, and should be grown in the *Cattleya* house suspended near the light. It is a native of Venezuela, and was first introduced in quantity by Messrs. Low and Co.—W. H. G.

**Cypripedium Vesta.**—This is a cross between *C. Harrisianum* and *C. Spicerianum*. From these two kinds we have several fine hybrids, including *C. Pitcherianum* and its varieties, *C. Adonis*, *C. Savageanum*, and the reverse, *C. Seegerianum*, &c., all of which, however, are totally distinct from *C. Vesta*. This was raised by Mr. Norman in The Firs collection, Laurie Park, Sydenham, *C. Harrisianum* being the seed-bearing parent. It was hybridised in December, 1889, and the seed was sown exactly twelve months later. The foliage is reticulated and much like that of the seed-bearing parent, and the bloom is borne upon an erect stout stem. This is bold, and a charming combination between the two kinds above mentioned. The dorsal sepal is large, pure white, slightly green at the base, where it is shaded rose and has a highly-coloured central line. The petals are very broad, slightly wavy, and measure nearly 5 inches across, with a well-defined mid-line of purple colour, the upper half soft light brown, the lower part light green and finely spotted at the base. The lip is pale green, flushed with brown.—W.

#### SHORT NOTES.—ORCHIDS.

**Dendrobium Dominicanum.**—This is a cross between *D. nobile* and *D. Linawianum*, and intermediate in character. The blooms are mauve-purple at the tips, almost white at the base, the petals of a brighter shade than the sepals, whilst the lip is white, with a maroon-purple disc.—G.

**Dendrobium nobile nobilium** (*Ed. Ingram*).—The flowers to hand under this name are not of this fine variety, but of a good form of the type. The true *D. nobile nobilium* is still a rare plant. The sepals and petals are heavily suffused with rosy purple, deeper towards the tips, whilst the blotch on the lip is intense crimson-maroon.—W.

**Cypripedium insigne.**—It is astonishing what a large quantity of this fine old plant is now grown for cut blooms, a large number of flowers finding their way daily into Covent Garden Market. For decoration of all kinds there is no better kind than this species, for its blooms are of a pleasing shade of yellow, and will last for a considerable time in perfection.—G.

**Cypripedium Goultenianum.**—I recently noticed this pretty hybrid in flower at Sydenham. It is the result of crossing *C. callosum* with *C. Curtisii*, and forms a nice combination. It has a fine dorsal sepal, heavily veined and shaded with bright rose, and long drooping petals, light at the base, but changing to rose at the tips, and spotted with large blackish spots, the lip more resembling that of *C. Curtisii*.—H.

**Calanthe Veitchii.**—A fine display of this charming winter-blooming plant is now to be seen in Messrs. Laing and Sons' nurseries at Forest Hill. The bright rose-coloured flowers, which are produced freely, are very welcome during these dull days, and with a little care a good succession of blooms may be maintained for a considerable time. This fine old hybrid *Calanthe* is of great service where cut blooms are in demand.—W.

### ART IN RELATION TO FLOWER-GARDENING AND GARDEN DESIGN.

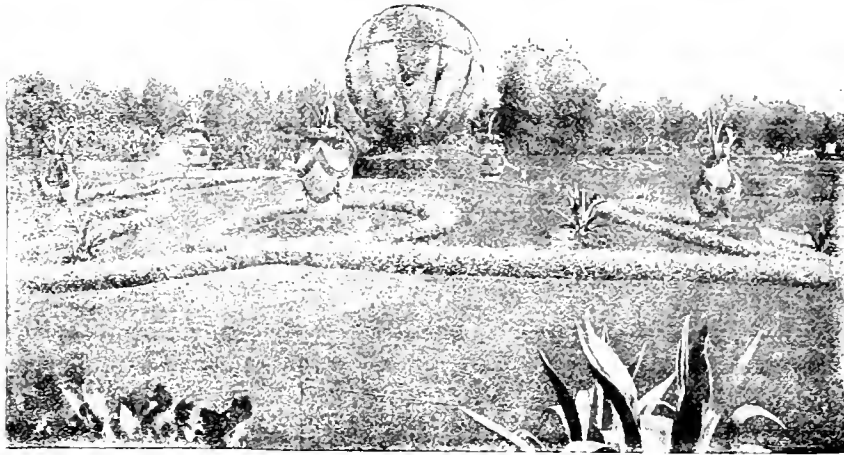
THERE is no reason why we should not have true art in the garden, and there is much reason why we should have it. There is no reason why a garden should be ugly, bare, conventional, or stereotyped, though most gardens are so. The word "art" being used in its highest sense here, it may perhaps be well to justify its use. As good a definition of the word as any perhaps is "To see and give form to beautiful things." We see it in its highest expression in Greek sculpture and in the works of the great old masters of painting, and in good landscape painting. But art is of many kinds, and the word is frequently applied in our own time to trifling ornament often overdone. Owing to the loose, "critical" talk of the day, it is not easy for everyone to get hold of the central truth of art, *i.e.*, clear-eyed study and love for Nature rather than invention and the bringing of the "personality" of the artist into the work of which we hear so much. We should understand first of all that the work of the true artist is always marked by its fidelity to Nature. Proof of it may be seen in many places, in our National Gallery and the Louvre; and the greatest art galleries being now open to all, there is little to prevent the simplest person proving what is said here about pictorial art in its highest expression.

But as a number of people unfortunately write much about art in the magazines and papers without having first received any training which enables them to see its laws, there is consequently infinite confusion in many minds about it. One may read book after book and essay after essay about art without being brought a bit nearer to the simple truth. Artists, brush in hand, will urge the false idea that it is not by observing, but by inventing and supplementing that success is arrived at. The strong man must be there certainly, but his true work is to see the whole beauty of the subject and to help us to see it, not to distort it in any way for the sake of making it merely singular. This, it is true, is often done as an easy way to popularity, but in the end it means bad work, and only the good work lasts. Other work may be the fashion for a season, owing to some one quality; but it is soon found out, and we have again to return to the great masters of all ages, who are always distinguished for truth to Nature.

The truth of the thing in all its fulness is almost the whole of the question, but the critics of the day will not take the trouble to see this. Artists, men of education,

and gentlemen write essays on art in which many unmeaning and misused words occur, but in which we may not once meet with the word *truth*. "Realism" and "idealism" are words freely used, and thoroughly bad pictures and examples are shown us as examples of realism when they are only remarkable for leaving out all the refinement, subtlety, truth of tone, and perhaps even the very light and shade in which all things we see are set. They leave out all the refined charms visible to those who look at Nature as well as at pictures, and then condemn the result as "realism." The man who will not take the trouble to see the beauty of the real is sure to go astray in quest of the "ideal."

There are men so blind to the beauty of the things set before their eyes in sky, sea, or earth, that they would seek to idealise the eyes of a beautiful child or the clouds of heaven; while all real students of natural beauty in landscape know that no imagining can come near to the beauty of



*Last expression of carpet gardening at Chicago.*

things seen, art being powerless to seize their full beauty, and the artist has often to let the brush fall in despair. Only a little, indeed, of the beauty that concerns us most—that of the landscape—can be seized for us except by the very greatest masters. Of things visible to us—flower, tree, landscape, sky, or sea—to see the full and every varied beauty is to be saved for ever from any Will-o'-the-wisp of the imaginary. The real is the fullest beauty.

But many people do not judge pictures by Nature, but judge them by pictures, and therefore they miss the subtleties of Nature, and all those delicate facts of light and shade on which all true work so largely depends. Many of them sneer at those who "copy Nature," but the answer to such critics is for ever there in the great work of the great men, be they Greeks, Dutchmen, Italians, French, or English.

It is essential to remember that part of the work of the artist is choice of subject—the selection of beautiful or memorable things, not necessarily the first things that come in his way. The Venus of Milo is from noble

type of woman—not a mean Greek. The horses of the Parthenon are the best types of Eastern breed, full of life and beauty. Great landscape painters, like Crome, Corot, and Turner, seek not ugly things because they are natural, but beautiful combinations of field, and hill, wood, water, tree, and flower, and grass, selecting views which are good in composition, and then waiting for the most beautiful effects of morning, evening, or whatever light suits the chosen subject best, to give us lovely and true pictures! But they work always from faithful study of Nature and from stores of knowledge gathered from her, and that is the only true path for the gardener, all true art being based on her eternal laws. All deviation from the truth of Nature, whether it be from the hands of Greek, Italian, or other artist, though it may pass for a time, is in the end found out and, it may be ages after the artist is dead, classed as *debased* art.

Why need so much be said about art? Because once we see the meaning of true "art" we can have no patience with what is ugly and false in art, and it becomes impossible for us to have the foregrounds of the fairest of cultivated landscape scenery dandied with a flower garden like a coloured lithograph. Many feel the right way from their own sense being true, but others will be better for seeing proofs of what is urged here as to the true source of lasting work in art in the work of the great artists of all time. And we may be as true artists in the garden as anywhere else.

So far we have spoken of the great work of the true artist, which is always distinguished by respect for Nature and by keen study of her. But apart from such we have a great many men who do what is called "decorative" work of a wholly different kind, useful it may be, but still not art in the high sense of delight and study in things as they are. I mean the whole class of decorative artists, who make our carpets, tiles, our curtains, and many other things of the kind. Skill in this way may be considerable without any attention whatever being paid to the greater and the higher art of which we have spoken, that art being concerned with life in all its fulness, the decorative "art" being the adapting of conventional or geometric forms mostly to flat surfaces.

This it is necessary to clearly understand, because for the flower gardener it is everything on which side he stands. Unhappily, our gardeners for ages have suffered at the hands of the decorative artist, who applies his conventional art to the garden, for which it is clearly unfit. Patterns which may be quite right on a flat sur-

face like a carpet or wall paper have been applied a thousand times to the surface of the reluctant earth. We see this in many gardens and in many books; it is, indeed, this adapting of absurd knots and patterns from old books to any surface where a flower garden has to be made that leads to deplorable design—wrong in plan and impossible as an abode for plants. It is so easy for anyone asked for a plan to furnish one of this sort without the slightest knowledge of the life of a garden, the needs of the plants of which should govern the design.

For ages the poor gardener has been troubled by trying to adapt himself to absurdities of this kind of work as regards plan, and for ages the beds in these plans were adorned with flowers in more or less simple and natural ways. But in our own time the same "decorative" idea has come to be carried out in the planting of the beds themselves under the name of "bedding out," carpet bedding, or "mosaic culture," of which, notwithstanding the many changes for the better of recent years, we see so many examples everywhere. In this the beautiful forms of flowers are degraded to the level of crude colour just to make a design and without reference to the form or beauty of the plants. When these tracery gardens were made, often by people without any knowledge of the plants of a garden, they were found to be difficult to plant; hence the desire to do without the gardener altogether and get colour by the use of broken brick, white sand, and painted stone, as at Kensington and various private places in our own day. All such work is wholly wrong and degrading to the art of gardening, and in its extreme expressions is ridiculous, as we see from this illustration of a garden at Chicago made during the past year.

Why are such designs bad and hateful? The good sense of all is the final court of appeal for even artistic things, and to many people these things need not be said, but the stereotyped gardens that abound in many

places show us how much has to be learnt by others. The men whose taste we should respect as judges are those whose life-work it is to study and portray beautiful, natural forms. To these men the modern garden is no more interesting than an oilcloth pattern, because instead of beautiful things we see emphasis given to mere pattern-work and flowers very

rest his eyes on a cottage garden, and may make a beautiful picture of it, because the cottage garden is itself a picture in thousands of cases. Why should the cottage garden be a picture when the gentleman's garden is not? The reason is, that one sees the plants and the vegetation not set out in any offensive, geometrical or conventional plan.

A simple plan is necessary, but in the making of a garden the plan should be subordinate to the living things. Here is an engraving of a very small cottage garden in Oxfordshire to show what is an artistic garden in its simplest expression. There was very little in this beyond the Monthly Rose and a few Pansies and the tree beyond, and yet it was right and beautiful. There are many better in every county in England. May the large gardens be as good in proportion to the money spent upon them and their size as this poor little cottage garden? Most certainly, and many charming gardens described and figured in THE GARDEN prove it; although it is rarely that a large garden possesses anything like the charm of simplicity and directness that many cottage gardens do. But there is no reason why such pictures may not be seen on a larger scale.

The gardener must follow the true artist, however modestly, in his respect for things as they are, in delight in natural form and beauty of flower and tree, if we are to be free from barren geometry, and if our gardens are ever to be true pictures. The gardener has not the strenuous work of eye and hand that the artist has, but he has to choose from ten thousand beautiful living things; to study their nature and adapt them to the soil and conditions that surround him to get the full expression of their

often denuded of their grace of growth and form. Then where shall we seek the artistic garden—one in which Nature is so far allowed to have her way, that nobody is frightened out of the garden or led to abhor it as absolutely an unclean thing? Now, while the artist may be driven from the common garden, he will perhaps go to

beauty; to place them rightly and in right relation to other things, which is a life study in itself, considering the great numbers of the flowers and flowering trees of the world. And as the artist's work is to see for us and preserve in pictures some of the beauty of landscape, tree or flower, so the gardener's should be to keep for us as far as may be,



An English cottage garden. Simplest expression of the beautiful garden.

in the fulness of their natural beauty, the living things themselves.

## KITCHEN GARDEN.

### CELERY CULTURE.

ALTHOUGH a good supply of Celery has always been regarded as indispensable in all private gardens, its importance seems to be more fully realised every year. Formerly Celery was rarely used in a cooked state except in soups, but since its extremely valuable medicinal properties have been discovered it is frequently served up as an ordinary dish. Moreover, where there is plenty of ground and good breadths of Celery can be grown, its frequent use in the dining-room is advantageous to the gardener, enabling him to make the most of other crops, and in periods of severe frost, when winter Broccoli is killed, the use of cooked Celery prevents the too frequent recurrence of ordinary greens on the table. As a rule much very early Celery is a loss rather than otherwise, as if more arrives at maturity, say at the middle of October, than can be used between then and the same time in November, wholesale rotting often occurs, especially with the white varieties, should the weather be wet and foggy; whereas successional rows being still in a growing state are able to assimilate the moisture and so escape the scourge. Some growers sow both their early and main crops of Celery in heat and afterwards prick the seedlings out into shallow boxes similar to those used for Geranium cuttings, but unless for an early row, which can be got out as soon as ready and protected, I do not care for the system. When large quantities of main-crop red varieties are brought forward in boxes and delay in transferring to the trenches (either through inclement weather or press of other work) occurs, the roots of healthy plants become so interwoven, that removal with a fair amount of soil attached becomes impracticable, flagging and a severe check follow, not unfrequently ending in a dogged refusal to grow, or its equivalent—bolting to seed.

The end of March or first week in April is a good time for sowing the seed of the main crop. I prefer raised beds in frames having a due south aspect and a sheltered situation. The soil, which may consist of a fairly rich friable loam previously passed through a coarse sieve and rendered porous by the addition of a little leaf-mould, should be made firm and have a gentle slope towards the sun. Sow broadcast, shallow, and thinly, finally making the surface firm with the back of the rake. Moisten with a fine rose and keep the frame close till the seedlings appear, covering with mats should the nights be cold. As soon as the plants are fit to handle they should be freely thinned, pressing those that are left to develop well into the soil with the finger and thumb in order to make them firm. Free ventilation by day in fine weather and early closing, so as to husband sun-heat, will best conduce to a sturdy growth and hasten on the plants to a transplanting size. Nothing surpasses shallow pits or frames for pricking the plants into, and as Celery enjoys a rich larder, they should be furnished with 8 inches or 9 inches of loamy soil overlying a good thickness of spent manure. Where ordinary frames are not at command, rough home-made ones composed of 12-inch deals and covered with mats at night will answer the purpose, lights being dispensed with. Nine inches between the rows and 4 inches from plant to plant is a suitable

distance, this allowing plenty of room to work in the trowel at lifting time. As the season advances and the plants gain strength, more air will be necessary until at length the lights are entirely removed. The less coddling Celery plants are subjected to the better, this being amply proved in the neighbourhood of Retford, where it is largely grown for market, and where thousands of plants are annually pricked out into sheltered nooks and corners with very little after protection.

In regard to the final trenches, I prefer those holding only one row of plants to those holding two, three, or more, and would always adopt them except where ground was scarce, as, independent of the difficulty of earthing up on the many-rowed system, the flat beds of soil, which in that case cannot be avoided, act as a receptacle for rain water, and in wet winters induce rotting, the reverse of what is the case with single rows earthed up in sharp ridge form and rendered almost rain-proof by the free use of the back of the spade. This I have proved over and over again. Where practicable Celery trenches ought always to be prepared some little time before they are wanted; the soil then has time to settle and holds moisture better. Where this is postponed to actual planting time, the trenches should be well trodden, raked over, and, if necessary, well watered and allowed to stand for a few days. Good spit manure suits Celery well, and when in full growth, about three copious drenchings, first with liquid manure and afterwards with clear water, will work wonders. I am, however, opposed to excessive feeding, as although healthy roots will assimilate almost any quantity of nourishment, the use of blood, night soil, or similar manures produces a rank, sappy growth totally unfit for eating and terribly prone to decay. Except in the case of very early rows wanted for use in September, earthing up ought not to be taken in hand until the plants are three parts grown, otherwise the sticks do not attain to a normal size. All suckers should be drawn away from the base, and if one man only performs the work, each stick should be tightly tied round with bass or soft string to prevent the soil from getting into the hearts. If two men can be spared so much the better, as one can then walk backward and grasp the plant with both hands, while the second man, walking forwards, brings the soil well up to the plants. In regard to the Celery maggot, sprinkling the foliage over with soot and wood ashes during showery weather, or sprinkling first with a rose, may keep the fly from striking it, but when once the mischief has commenced nothing but determined and repeated hand-pickings will conquer it. The common Bracken is the best material for covering the ridges in time of frost, this being less unsightly than straw, and where only a row or two is grown, oiled canvas, now sold at a cheap rate, answers well. With regard to varieties, Sandringham White is hard to beat for early work, but for main crop Wright's Grove White is a grand variety. Of reds, there are many strains almost equally good, but I prefer Leicester Red, this being of first-rate quality. The old Ivory's Nonsuch is a good pink variety.

J. CRAWFORD.

**Trenching.**—Those gardeners who left the work of preparing the soil for the ensuing season's crops until it had recovered somewhat from the heavy rains of autumn have done wisely. It is surprising, given a few weeks of dry weather, how soon the ground will get back to its normal condition after a long spell of wet, and how rapidly work can be caught up. The past week or two

has been singularly favourable for trenching. There have so far been no frosts to interfere with the operation, and now it is found that ground is being very rapidly prepared for crops. As to the benefit to crops of trenching, it seems hardly needful to refer to it at this time of day, yet there are thousands who garden and who are as neglectful of trenching soil as of any essential in garden work. The benefit is indeed immense. How many gardeners of a sort are there who are constantly calling out for more cropping space who could practically double their crop produce did they but regularly and deeply trench ground, as is done in all good gardens. With these an ordinary digging of some 10 inches or 12 inches depth is thought to be ample, simply because it is so much better than ploughing. The addition of some 3 inches more in worked depth of soil every few years until from 30 inches to 36 inches of depth is obtained is eventually productive of wonderful results.—A. D.

**The season and Celery.**—This is one of the best seasons I ever remember for Celery, the heads being heavy, solid, with a crisp and nutty flavour. A few weeks since I noted a correspondent referred to an early batch which had been seriously injured by over-feeding. This is an error of culture which I have previously called attention to. As long as Celery has a fairly rich root-run provided when the plants are first set out, very little manure water or other artificial dressings are seldom needed; certainly not during such a cool and dripping season as we have now passed through. I give the Celery two light dressings of salt, which just give the stimulus needed, the growth being solid and devoid of pithiness. Celery which is over-fed quickly goes to decay. There is now-a-days too much of a tendency to force vegetables into a coarse growth by gorging the roots with liquid manure and surface dressings of artificial manures, and Celery is no exception. On cutting several heads through lately at a Chrysanthemum show to test their quality every one of them had either started to decay or were soft.—A. Y. A.

**A good keeping Onion.**—For many years I have grown Bedfordshire Champion, and have never found a better keeper. I first saw the above variety largely grown for market at Sandy and the district around, and was informed it was the best keeping Onion, even superior to James's Keeping. I have found it so, and for many years have grown none other for late use. I admit it does not attain a huge size without special culture, but for keeping, size is not required. This old, but good form is well worth growing where Onions are required late in the spring.—W. M.

**Cabbage Winnigstadt.**—This is one of the best varieties for autumn use. The greatest difficulty is to get it true. By making two sowings there is no lack of good Cabbage from September to December. The useful St. John Day's Cabbage runs the Winnigstadt very hard for quality and usefulness for autumn cutting. I can also strongly recommend the Winnigstadt for light soils. I have also sown it in July and August for spring cutting, but with such really good spring varieties as Ellam's, there is no need to sow at these dates.—G. W.

**When to dig heavy soils.**—Gardeners who have a heavy soil find it more difficult to select favourable opportunities for digging than those who have sandy soils to deal with. Especially is this noticeable in a season like the present. The moisture from light land drains away quickly, and after a couple of dry days the digging may be proceeded with. But not so on heavy land, as at this period of the year a week or two is needed to bring it into condition for working, and very likely several weeks have to elapse before such an opportunity occurs. It seems good advice to recommend the digging of all heavy land in the autumn so that the winter's frosts and snow can act upon it. Unfortunately, there are heavy soils that cannot be so dealt with even during the most favourable periods for autumn digging. The best period I have found to operate on such heavy soils



is to wait until February is in, and then if a dry period occurs commence digging in earnest. Turn the soil up roughly with digging forks—not spades upon any consideration—and the frosts and drying winds will act upon it, and by the time it is wanted for spring cropping it will work very freely. The result will be a good depth of pulverised soil, which may quickly be prepared for cropping.—KITCHEN GARDENER.

**Tomato cuttings.**—In October I advised the insertion of cuttings of any favourite variety—several in one moderately sized pot—and the wintering of them in an intermediate house close to the glass. These should now be topped and the cuttings inserted singly in very small pots, and plunged in a mild bottom heat in the Cucumbers house. These will soon root, and may then be potted on, finally fruiting them in 9-inch pots. By this system early fruit is obtained, the supply being kept up by spring-sown plants. Seed may now be sown of any hardy prolific variety, two seeds being placed in each  $2\frac{1}{2}$ -inch pot, the strongest plant being retained. Plants that have been bearing fruit throughout the winter may with increasing length of days be fed more liberally, top-dressing being repeated as often as new feeders appear on the surface; attend also to fertilisation at noon on fine days. J. C.

EARLY SEAKALE.

In order to have Seakale fit for use early in the winter the crowns must be well matured and the leaves falling away from them in October. If the leaves have to be dragged from them as they are lifted for forcing we cannot reasonably anticipate a strong early growth. Whether we expect it or not, strong growths are not had from plants thus treated, but, on the contrary, nothing but spindly shoots are forthcoming. As a rule, fresh plantations are formed too late. By starting the plants early there is not only a good prospect of their becoming extra strong, but they also mature earlier, and as a consequence are more suitable for early or hard forcing. The old-fashioned plan of forcing the plants where they are grown with the aid of earthenware or other coverings and hotbeds undoubtedly answered well, and is still practised with good results in many gardens, but it is a slow, rubbishy, and cumbersome proceeding, and is rapidly giving way to that of raising plants thickly, lifting and forcing these in heated houses, including Mushroom houses and pits. It is not contended that such fine produce is had by the newer method as by the old, but far greater quantities of good well-blanching Seakale are forthcoming now-a-days without much trouble. There is, however, room for an extension of the practice, more especially in the direction of growing a thousand plants where less than half that number is now considered sufficient or, rather, has to be enough. Instead of devoting so much garden room to the uncertain crops of Broccoli as formerly, or to Brussels Sprouts, Savoys, and such like, only to spoil half these, owing to their not being sufficiently appreciated in the dining room, why not grow more of a class of vegetables that invariably meet with favour? In the latter category Seakale must be placed.

Now is the time to decide upon taking this step, as it also is the time for commencing the propagation of a fresh stock. According as the roots, or rather plants, are lifted for forcing, they are usually trimmed to admit of packing them thickly in soil in pots, boxes, or beds prior to being forced. This means cutting off a number of clean straight thongs about the size of a man's little finger, and it is these which are most suitable for propagating. They should be cut straight across at the thickest and which is always to be the upper end, and a slanting cut made at the other end, the cuttings not exceeding a length of 5 inches. It is far too soon to trust these in the open ground, but instead of this all should be dibbled in closely into beds of soil in pans or boxes, only just showing above the soil. They can then be stored in a shed or outhouse out of the reach of very severe frosts,

and the soil about them ought to be kept moist. If the present is not a convenient time for placing in boxes, the cuttings should yet be made soon and stored roughly in sand or fine moist soil for a few weeks. By the end of March all should have sprouted and also commenced root action; but if they were put in late or are backward, place them for a few days in a gentle moist heat, and this will bring them forward quickly. When the stock of Lily White was still small I had all the stouter thongs cut from plants that had been forced and made into cuttings, not a few of them being freely split up, and yet all started well in heat. In any case all ought to be hardened off and planted out not later than the second or third week in April, and, the state of the ground permitting, they should be got out at the end of March, an early start, as before hinted, being of the greatest importance. Seakale requires, and should have, a freely-matured, well-worked breadth of ground devoted to it, and this should be selected and prepared at once, as it is very certain the cuttings will not start well in lumpy soil. Plant with a dibber firmly and just deep enough to bury the tops of the cuttings, disposing them from 12 inches to 15 inches apart in rows not less than 18 inches apart. Hand-picking early in the morning is the best remedy in the case of small black slugs attacking the cuttings, and the shoots on the latter ought to be reduced to one in each case, as if more are left to grow, the chances are the crowns will be small. Failures may be made up by transplanting. Should dry weather set in before the plants are well established, give an occasional watering, while surface hoeing will be needed during the early part of the season to keep the ground loose and free of weeds. Raising from cuttings is far better than sowing seed, as seedlings rarely attain a serviceable size in one season.

SELWOOD.

**Huge Onions.**—Some years back it was thought that 1 dozen Onions that weighed 1 dozen lbs. were good. Then Mr. Clarke (Earl Ellesmere's gardener), Mr. Wingrove (Rousham Park), and Mr. Doherty showed Onions, a dozen of which weighed 18 lbs. and 20 lbs. After them came Messrs. Wilkins, Pope, Lye, Kneller, and Bowerman, who have amongst them secured the latest prizes. The weight went up to 24 lbs., 28 lbs., and 30 lbs. Then Mr. Kneller grew a dozen Ailsa Craig 34 lbs., and now last year Mr. Wilkins has topped it with 39 lbs. to the dozen. Messrs. Carter, of High Holborn, showed some bulbs over 4 lbs. each. Messrs. Peter Henderson, of New York, have even eclipsed that. They possess an Onion that has been grown to the following weight: New Mammoth Pompeii, between 4 lbs. and 5 lbs.—A. W. CREWS, *Banbury*.

**Kingsholm Cos Lettuce.**—I have grown the Kingsholm Lettuce for many years. I like it best for summer use, as I find it stands drought better than many of the newer kinds. I was advised some fifteen years ago to give the above variety a trial, and having a poor gravelly soil to deal with had a deal of trouble with Lettuces owing to the plants bolting in hot weather. This variety is, however, free from that defect, and in hot, dry summers is invaluable for its good keeping qualities. It may be described as a white Cos, perfectly solid, with folding leaves, which require no tying, this being a great advantage, as some of the Cos varieties decay badly when tied in wet weather. I have not seen this variety grown much in the London district.—W. M.

**Pea Criterion.**—For the past three seasons I have grown this Pea in quantity, and find it one of the best for second sowing. It may be termed a main-crop variety. I sow it to follow those planted out or sown early on warm, sheltered borders. I have a liking for the old well-known Champion of England Pea when it can be obtained true. Criterion may be termed an earlier form of that variety, but it is larger and partakes much of the character of Ne Plus Ultra in size and colour. Last summer this variety cropped splendidly, and did not suffer from mildew. It

grows from 5 feet to 6 feet high. In some gardens this height may not be desired, but where it can be grown it is much liked, as the haulm is covered with pods from the base to summit. It also keeps up a good succession of pods, these not coming in all at once, as in the case of many of the larger podded varieties.—G. WYTHES.

NOTES ON BROCCOLI.

Those gardeners who are expected to provide a daily supply of Cauliflower and Broccoli all the year round will have found the mild weather a great boon, as I think it will be acknowledged that it is one of the most difficult things in vegetable culture to have a full supply of Broccoli constantly all through the winter. Only those who are expected to do it are aware of the care and forethought required to prevent breaks in the supply, more especially when the garden is low and the soil heavy. Even on higher ground and with a light, sandy soil I find it no easy matter. One of the most important items is the selection of a limited number of proved varieties, planting out the strongest of each sort as soon as fit to handle, to be followed again a few weeks later by the weaker ones that will have grown and become stronger. My experience is that the last planted ones are often the most useful, as they come into use immediately after the first planted ones of the same sort, and continue the supply until another and later variety is ready. I have heard many complaints of spring Broccoli turning in now and causing anxiety as to what is to take their place in a month or two. If these had been planted at intervals as mentioned, I think they would not all be coming in now and forming a glut, to be followed by a scarcity later on. At the same time, it may be the varieties ordered were not true to name, and this explains the cause of their coming into use at an unseasonable period. The following are the sorts that I chiefly rely upon, and in both mild and severe winters they have proved their worth. For cutting, up to Christmas I have found none to equal Veitch's Self-protecting Autumn; when true to name it is all that its name implies. Following Autumn Giant Cauliflower it is one of the most useful varieties, and has never disappointed me. Snow's Winter White is a well-known and highly-esteemed sort, ready for use in mid-winter. The first planted batch of this is just over, and the next batch of the same variety is keeping up the supply in sufficient quantity to meet requirements. Backhouse's Winter White is a good successor to Snow's here, always ready when the latter is nearly finished; it is also one of the best to withstand wet and frost. Cooling's Matchless is an old variety, but one that I find extremely useful and reliable, and I should be sorry to discard it. Another advantage is its excellent flavour. Even when lifted and stored in sheds to protect from frost its flavour is superior to that of any others treated in a similar manner. April Queen is a variety that should be better known. It is very hardy, with lovely pure white heads ready in March and April; on a light soil it has proved first-class for some years. Veitch's Model will be ready by the time the last is over, and the value of this variety is proved by its greatly increased cultivation. Late Queen completes the list, and I have yet to see the winter that will seriously injure this variety, its season being May and June. Its keeps up a supply of large and tender heads until the Cauliflower is fit to cut. It is never advisable to be too conservative in selecting varieties, as novelties may, and do occasionally prove to be of extraordinary merit; but it is always safer to depend on well-tried

sorts that will not land the gardener in difficulties. We often see it advised that Broccoli should have the heads layered towards the north before frost sets in. Such a practice may be beneficial in some localities, but I must confess to not having discovered any advantage. Those plants not heeled over have passed through hard weather fully as well as those that were so treated. Of late years from the end of October onwards all Broccoli turning in has had the heads tied up, thus protecting them from wet and enabling them to pass safely through several degrees of frost: and if there has been any appearance of sharp weather, the plants have been taken up with a good ball of soil and placed in frost-proof structures.

W. G. C.

**Radish French Breakfast.**—As a good main crop and late Radish I doubt if there is a better variety than the French Breakfast. I have pulled roots daily from the open right up till the present time, but of course the mild weather has been the cause of this. If I had covered the roots with dry litter, I daresay I could have had them for a few weeks longer. A. Y.

**Flavour in Brussels Sprouts.**—I quite agree with the remarks of "E. J." on the bad flavour of some varieties of this useful vegetable this year. Several gigantic new varieties that were sent me for trial are so strongly flavoured on a light soil, that I have stopped sending them into the kitchen. The only really good and pleasantly flavoured sorts that I have are Matchless and Rosebery, the sprouts of both of medium size and very firm.—W. G. C.

**New Turnip Early White Milan.**—This is a valuable Turnip for sowing in frames or as a first early in the open ground. Last season it was very good and the earliest variety I have grown. In appearance it is much like Extra Early Milan and equally as early, if not earlier. Early White Milan is not large, and a distinct strap-leaved variety, coming into use ten days or a fortnight earlier than Snowball and other white varieties. The bulbs are pure white, not at all large, flesh sweet and of superior flavour. Its quick growth makes it a valuable addition to our list of none too many really good early kinds. For frame work the Milan type is unequalled, but for summer sowing in the open I do not advise it.—G. WYTHES.

**Salsafy.**—On the Continent, and especially in France, this vegetable is highly esteemed both by the rich and the working classes. It is delicious when properly prepared and so simple of culture, that one wonders why it should be so little grown in this country. In hard winters, when there is not too much variety in vegetables, Salsafy forms an agreeable change, and it is said to be one of the most nutritious vegetables cultivated in gardens. The seed should be sown early in April, but it is imperative that the ground be thoroughly prepared for its reception. It must be stirred a foot or more in depth. Ground that has been trenched a year or so previously will be just right and plenty of manure must be worked in. The seed drills will require to be about 1 foot apart and the plants thinned to some 8 inches from each other. Frequent surface stirrings will promote a free growth. On the approach of winter the roots should be stored in dry earth.—J. C. B.

**Selection of vegetables and new kinds.**—The seed catalogues now coming in fast remind us that the season of selection is close at hand. There will doubtless be the usual list of novelties and specialities which the older practitioner solemnly warns us to fight shy of. To the man who is interested in vegetables or flowers the growing of these novelties forms an agreeable change. I admit I have a failing for the new things. It may be said, Why spend money on novelties till one is sure of them? If the reports of trials or the awarding of certificates are noted, it will be seen how very few new fruits or vegetables, especially the latter, are awarded certificates, so that there need be little doubt as

to quality with such a rigid selection. We have more novelties now than in years gone by. Many appear as old friends with a new name, and I fear many are made improved selections merely to fasten a name upon them. In these days of cheap horticultural literature there is no need to solemnly abjure all new things, as was done in the old days when there was little chance of knowing the value of any new introduction. New things of any real value come to the front rapidly, so that one is soon able to know what to grow.—W.

#### WHAT'S IN A NAME?

FROM the letters that have lately appeared on the naming of plants, it is evident that there is a growing disposition to resent the crackjaw nomenclature that is now so much in vogue. The time is ripe for the return of that Peter Bell to whom a Primrose was "a common Primrose," and not "Primula vulgaris." Such an apostle would have many disciples, my humble self among the number.

We want, as "H. O. W." (p. 520) says, English substitutes for the erudite appellations that many of the lowly denizens of our gardens are now burdened with. Winter Flag is, I think, as good a name for *Schizostylis coccinea* as can be coined—better, certainly, than Flame Lily, as it is called by some, for neither is it a Lily nor is its flower of the hue of flame. Almond Cross for *Schizopetalon Walkeri* is undoubtedly well chosen.

Some of us are cursed (possibly there be those who will think I should have written blest) with a fatal facility for acquiring Latin polysyllables. If indulged in, this pernicious habit so blunts the moral feeling of those addicted to it, that there are men—and women, too, more's the pity—who will scarcely feel a pang of compunction when, after a pause (during which he or she has vainly endeavoured to assimilate a string of Latin words), one of those "good decent folk," alluded to by "H. O. W.," says with a sigh, "Dear me! what a very long name for such a little flower. Isn't there a simpler one?" Then, again, as "J. C. L." and "A. K." (pp. 550 and 13) point out, these Latin names are nothing if not inconstant. To-day *Hyacinthus*, to-morrow *Galtonia*; to-day *Tritoma*, to-morrow *Kniphofia*, in the correct pronunciation of which the "K" is, I understand, eliminated, the very name suggesting the wanton decapitation of the citizens of the parterre. *Aralia Sieboldi*, which we got to know so well, now masquerades as *Fatsia*. The *Belladonna Lily* has turned out to be the one and only *Amaryllis*, all the rest being now *Hippeastrums*, while the *Spiraea japonica* of our youth has been re-baptised *Hoteia*.

Then there are people who make matters worse by getting hold of a Latin name and mispronouncing it through what is really ignorance, though they consider it erudition. One often hears *Deutzia* called *Doitzia*, under the mistaken impression that it is a German word, and I once came across a linguist who, when talking of *Cactus Dahlias*, would persist in pronouncing Juarezi "Hooarezi," quite oblivious of the fact that although in the Spanish tongue Hooarezi is correct, the word directly it is Latinised is pronounced after the classic Latin fashion.

One can hardly leave the subject of nomenclature without deprecating the practice, yearly becoming more common, of christening novelties, especially in *Chrysanthemums*, with lengthy titles. The French raisers are the worst offenders in this respect, but Americans and our own countrymen are not blameless. *L'Enfant des deux Mondes* is a stumbling-block that

has brought many a good gardener to grief, and not only gardeners, but nurserymen as well, for I have at this moment two catalogues before me in which the name is mis-spelt. What excuse, too, can there be for Gaston Chandon de Brialles, Mons. Pynaert van Geert or Souvenir de Mme. Blandinières in *Chrysanthemums*, and Susanne Marie Rodocanachi or William Allen Richardson in *Roses*? All of these god-parents are doubtless very worthy people and quite undeserving of the odium which now attaches to their names through the misplaced obsequiousness of plant producers. S. W. F.

## GARDEN FLORA.

### PLATE 997.

#### THE GENUS LYCORIS.

(WITH A COLOURED PLATE OF *L. AUREA*.)

THERE are five species of *Lycoris*, and four of them are in cultivation in England. They are natives of Japan and China, and whilst botanically they are placed near to *Hippeastrum*, they more resemble in bulb, leaf, flower and habit some of the *Nerines*; indeed, two of the species, viz., *L. aurea* and *L. radiata*, are still called *Nerines* by nurserymen. All the species are sufficiently ornamental to rank with good garden bulbs, and they are probably easy enough to manage when their requirements are understood. Hitherto, however, we have not had much success with them, no doubt because the treatment they have had has not been suitable. At any rate, this is true of

*L. AUREA*, which has been in cultivation more than a century, having been introduced into English gardens by Dr. Fothergill in 1777, when it was called *Amaryllis aurea*. This is generally described as a greenhouse bulb, but I am now convinced that it requires warm house treatment. In July last we received from Hong Kong a box of bulbs of this plant. They were as large as the bulbs of Emperor Daffodil, and they nearly all looked promising for flower. Along with them came the following significant note—

I send you a box of *Lycoris aurea*, and I hope it will reach you all right. Is it not somewhat remarkable that these bulbs should remain dormant in the ground all summer in such a climate as this, with a temperature of 85° Fahr. in the shade and a rainfall of 100 inches in the year, heat and moisture sufficient, one would think, to start into feverish growth the most hide-bound of bulbs? The *Lycoris*, however, sleeps through it all, pushing up its tall scapes of yellow flowers at the end of our summer. Here it is one of the most popular of garden plants, ranking with *Crimmums*, *Pancreatium*, *Eucharis*, and *Lilium longiflorum*. I do not remember to have ever seen it in English gardens.

The bulbs sent flowered well at Kew, and they are now in full leaf in an intermediate house, a few of them having been placed in a hot stove as a test. The bulb is like that of a Daffodil; the leaves, which are numerous and start into growth along with the flower-scape, are like those of *Nerine sarniensis*, and the scape is 18 inches high, with an umbel of deep yellow flowers, like very large *Nerines*, strong bulbs producing twelve flowers in an umbel. Mr. Moon's drawing shows the beauty of the plant, and as bulbs of it are offered by Japanese nurserymen at a low price, it ought soon to become as popular as the Guernsey or the *Belladonna Lilies*.

*L. RADIATA*, often called *Nerine japonica*, is an old garden plant, for it was noticed by Kämpfer in 1712, and cultivated in England in 1750. It is a native of China and Japan, where it is commonly cultivated in gardens, and offered by the nursery-

\* DRAWN FOR THE GARDEN by H. G. MOON in the Royal Gardens, Kew. Lithographed and printed by Guillaume Severeys.

500-5000  
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men at about 2s. 6d. per hundred. It is very like a Nerine, Thunberg mistaking it for the Guernsey Lily, *N. sarniensis*, which it resembles in bulb and leaf, the scape being a foot long, with an umbel of from four to twelve red flowers, which are developed in early autumn. It generally flowers in October at Kew.

**L. SQUAMIGERA.**—In 1887 Herr Max Leichtlin and others distributed bulbs of this plant under the name of *Amaryllis Halli*. They flowered in several collections, notably that of Mr. Gumbleton in 1891, when he wrote that his plant had pushed up a flower-spike in July, which grew to a height of 2 feet, and resembled a strong-growing Nerine. It bore an umbel of five flowers each of about twice the size of the largest Nerine bloom and coloured lilac-pink, with a flush of blue down the centre of each petal. Mr. Gumbleton was disappointed with it. On the other hand, it has been described as a handsome plant, with a scape a yard high, an umbel of seven flowers, fragrant, 3 inches or 4 inches long, coloured light rose, shaded with a peculiar grey. It resembles the *Belladonna Lily* in bulb and leaf. It is said to be often planted by the Chinese in their cemeteries. According to *Garden and Forest*, it was introduced from Sanghai, China, by Dr. G. R. Hall, who cultivated it in China in 1860 and who sent it to Messrs. Hovey, of Boston, who distributed it a few years ago. It is said to be hardy, but the first bulb received at Kew perished in the winter, and since then it has been grown in an unheated frame.

**L. SANGUINEA.**—I saw a coloured drawing of this plant a short time since in the hands of a nurseryman, who said he had a consignment of bulbs of it on the way. It does not appear to have been cultivated in England, but from what I can gather it is likely to find favour with bulb growers. Its bulbs are about 1 inch in diameter, the leaves are linear, the scape  $1\frac{1}{2}$  feet long and the umbel six-flowered, the flowers being nearly erect and regular, over 2 inches long and coloured bright red. It is a native of Japan, where it is also cultivated in gardens.

**L. STRAMINEA** was introduced to Chiswick from China by Fortune in 1845, and was described by Dr. Lindley. I do not think it is in cultivation anywhere now. It is described as being very like *L. aurea*, but the flowers are pale straw-coloured, with pink streaks and red dots.

**L. SEWERZOWI**, a plant described and figured by Regel in his *Gartenflora*, t. 914, is now referred to *Ungermia trisphæra*, a large-bulbed plant with small red flowers. It is in cultivation at Kew, Dr. Aitchison having brought it from the Afghan boundary in 1886.—W. W.

—Owing to the difficulty that has been experienced in the past in flowering this very beautiful bulbous plant, the following note from a correspondent in China may be of interest:—

The temperature the *Lycoris* grows in varies from 93° in the height of summer, when the bulbs are resting, to 55°–60° in winter, when they are growing. Sometimes for a few days in January the thermometer falls to 40° or lower, but that is for but a short time. When the plants make their leaves there is absolutely no rainfall, or next to none. When they rest it is our wet season. It is a most lovely thing; I think it the most beautiful bulbous plant I have ever seen.

That the above treatment followed in this country will lead to success is, I think, most probable. At Kew last September a number of bulbs received when at rest from China flowered. These are now growing as freely as *Narcissi* in a temperature of 55°. I have also plants in a like temperature doing very well. When the foliage dies down I shall shut up the plants in a sunny frame and water sparingly. The beautiful *Lycoris squamigera* can, I fancy, be grown under the same conditions as *Amaryllis belladonna*; anyhow, it is quite hardy. *Lycoris sanguinea* is a comparatively unknown plant, I

believe, and a drawing I have shows a fine spike of very beautiful orange-red flowers.—R. W. WALLACE, *Colechester*.

## THE WEEK'S WORK.

### FRUIT HOUSES.

**POT VINES.**—The canes started for early fruiting will now have made sufficient growth to be tied. In getting the rods into position it is necessary to use care to prevent the buds being rubbed off. If any Vine has not made sufficient progress it is better to allow the cane to remain in a bent position for a short time longer. The grower of these early forced plants must now determine which will be the fruiting growths. In some cases it will be necessary to remove some growths entirely. I am not an advocate for allowing a too great number of useless shoots, which rob the roots. With Vines now at the flowering period more warmth will be necessary and greater care in airing; indeed, very little air will be necessary. Up to this date little moisture at the roots will have been necessary where heating materials in the way of manures are used. If fresh heating material is required, it is better to place in position at once before the flowering period, so as to maintain a temperature of 80° at the roots. When adding new linings it is well to examine and test the roots as to dryness. In watering use tepid water. Much food will not be required till there is a liberal new root growth to absorb the food, which should be given in weak doses, the quantities being increased as soon as the fruit has set. With heated manure as the fermenting material the greatest care is necessary to prepare such before using, as when placed in heat the hot steam will greatly injure the tender growth in a close house. By using a liberal quantity of fresh leaves with the manure this is prevented, and a genial warmth is maintained for a longer time. Whilst the Vines are in bloom the evaporating pans should not be filled, and the glass of the house should be kept as clean as possible, as after fogs or near towns soot soon accumulates, causing a bad set and weakly foliage.

**VINES PLANTED OUT.**—Much the same treatment is necessary as with pot Vines. Those who force early and have a small well-built house will now have the growths on their Vines an inch long if ripe Grapes are required early next May. To get an even growth much better results are secured by covering the surface with warm manure as advised for the earlier pot Vines. Vines that have been forced for years may not require much to induce them to break freely, but young canes at this time of year often break irregularly if not assisted in this way. The night temperature for Vines at this stage should be 55°, with 5° to 10° higher by day, allowing the thermometer to run up freely by sun heat, disbudding as soon as possible to the required number of shoots when it can be ascertained which are required to fruit. During dull weather use the syringe sparingly, as the new growth just pushing will be injured if too wet. A safe plan is to get the canes dry by the time daylight ceases, there being sufficient moisture in the house after that time without syringing. With only a limited amount of daylight and little sun it is not wise to apply moisture too freely.

**MIDSEASON GRAPES.**—To have well-finished Grapes in quantity in July it is well to start the Vines at this date. The borders should ere this have been top-dressed, examined as to dryness, and the rods cleaned and prepared for forcing. Disbudding and syringing will be the principal work for a time. Old Vines show a great number of buds. These need thinning out as soon as the strongest can be selected. Where practicable a bed of leaves is of great assistance to the Vines, as it saves the syringing and a nice moist atmosphere is maintained. For houses just started the temperature may range from 45 to 50 by

night and 10° higher by day, but with young Vines in mild weather a few degrees higher may be necessary. Should the roots be outside, a good depth of warm leaves and litter will be beneficial, covering over the heating material to throw off heavy rains and snow.

**LATE VINERIES.**—All fruit should now be cleared from the Vines and bottled. It should be placed in a cool room, as if a suitable temperature is maintained and some small pieces of charcoal placed in the water, the bunches keep quite as well, indeed better than on the Vines. Pruning should be done as early as possible to give the Vines a rest. Cleansing the rods and all portions of the house should follow, removing all loose bark, but not scraping, as is at times practised. Any loose bark may be removed, the rods washed afterwards with warm soapy water and thoroughly scrubbed should mealy bug or other insect pests be troublesome. I attach more importance to thorough washing than painting, as the washing removes the insects, and if a strong solution of soft soap is used few escape. Painting over afterwards is necessary, a good mixture for this purpose being Gishurst compound, sulphur and clay, with a handful of fresh lime, making the mixture like thick paint, and taking care to freely cover the rough or knotty portion of the stem and crevices. The walls should be limewashed with fresh lime, and if mildew was present last season, use sulphur freely in the wash. Remove the loose surface soil and top-dress with good loam and some approved fertiliser. Previous to the surface dressing a thorough soaking of water should be given, as the roots will have got dry during the time the Grapes were hanging. Any additions to borders or renewal of same should be done.

**MELONS.**—Now is a good time to make a start with these, and if an early lot of plants was raised in December they will be in condition to plant out at this date. For very early fruit pot culture is best, as the roots being confined the plants make a short-jointed growth and soon mature fruit. For pot plants a certain amount of bottom heat is necessary. The pots may be plunged in manure, or, what is better, stood over hot-water pipes. Fourteen-inch or 16-inch pots will finish three or four nice sized fruits. The soil should be of a firm loamy nature, with such additions as burnt wood ashes, mortar rubble and bone-meal. If manure is the means of bottom heat it is well to place the pots on a firm base, as if on the manure there is a shrinkage, and when the plants are tied to the trellis they suffer in consequence. Much care is necessary at this early date. At the start, water must be sparingly given, and what little is required should be given in a warm state. A night temperature of 65° to 70° should be maintained, with a liberal rise during the day. The glass at night may with advantage be covered in severe weather. Another sowing should now be made, and in many gardens this will be the first. I prefer to sow in small pots, sowing a couple of seeds in each, thinning to the strongest when above the soil. No moisture will be required if the soil is damp till the seeds have germinated.

**STRAWBERRY FORCING.**—Now is a good time to introduce plants into heat for April fruiting. I rely upon *Vieomtesse H. de Thury* for first use, and those who have this variety and have not started forcing may now begin with every chance of success. If a slight start in the way of bottom-heat can be afforded the plants, so much the better. I use frames for this purpose, with a good depth of fresh leaves. Before introducing the plants into their forcing quarters it is well to make sure they are free of mildew. If not, a thorough dressing of sulphur should be given, dusting all parts of the plants, specially the under side of the foliage. Plants started early in December will now be showing their flower trusses, and as soon as they have pushed well above the foliage the plants may be removed to warmer shelves, as less moisture will be required. Care must, however, be taken not to give a check in any way, as doing this will cause abortive blooms. When removing from one house to another choose a warm day and do the work quickly. A higher temperature may

be given when the fruit has set. For succession crops such varieties as Royal Sovereign, La Grosse Sucrée, President, Auguste Nicaise, and the good old Keens' Seedling, where it is grown from a true stock, are valuable. The first named is a valuable addition to our early fruits and as early as Noble, with superior flavour. Shelves in fruit houses can often be utilised from this date. I do not recommend removal of surface soil or top-dressing when placing indoors, as this destroys the small roots. By the time the roots lay hold of the new soil the crop is cleared, so that the surface dressing is wasted. It is very easy to feed later on. G. WYTHES.

#### KITCHEN GARDEN.

**MAKING HOTBEDS.**—In the majority of gardens the middle of January is the best time for making up hotbeds for early vegetables. In the first place the frames should be measured and the site marked out, driving in a stout stake at each corner as a guide to the workmen, and allowing sufficient room for a 2½-foot or, better still, a 3-foot lining. Rank stable manure is best avoided, as it causes the bed to heat excessively for a short time and then to go cold. If sufficient leaves cannot be had, vegetable refuse or old garbage, usually found on the premises at this period, may be added. Let the bed be well trodden at intervals, using short litter for the outsides to bind it and finishing off with a good slope towards the sun. The frames should at once be placed in position and the soil thrown in. If soil is scarce, that used last year may again be used, adding a little leaf mould to keep it open and a sprinkling of some approved fertiliser.

**POTATOES.**—If an early variety, such as Ring-leader or Victor, had been placed in an intermediate heat a few weeks ago, sprouts a quarter of an inch long should now be formed. These should be reduced to a couple on each, these being left at the extremity of the tuber. They may be planted in rows 15 inches apart and 1 foot between the tubers, and about 4 inches deep. If no steam is engendered the lights may be kept closed until growth appears, when a little air must be given in mild and sunny weather.

**CARROTS.**—If these are sown in very shallow drills 8 inches apart, plenty of room will be left for intermediate rows of Radishes. These will be drawn before the Carrots are large enough to be shaded by them. A row of Ellam's Early Cabbage or the pickling variety, where autumn sowings failed, may also be sown. Carrots at this date liking plenty of heat, this may be increased and growth accelerated by keeping the frame well matted down by day as well as night till growth appears. A strict watch, however, must be kept, as if darkened after once through the soil the Carrots become drawn and blanched. A row or two of the old French Forcing may be sown, this being perhaps the quickest bulbing variety, also Nantes Horn and Market Favourite, the latter being about the best frame Carrot in existence.

**RADISHES.**—If a frame can be devoted to these, so much the better, as sown between rows of Potatoes they seldom do much good. Broadcast fashion is the best mode of sowing, raking the seed in a quarter of an inch deep and making the surface firm. Air must be regularly supplied when frost is absent, or the Radishes soon become leggy and useless. For quick growth the old variety Wood's Frame is still hard to beat, French Break, fast being also an excellent variety.

**SPROUTING POTATOES.**—Successional supplies of tubers should now be placed in boxes containing a little leaf-mould and removed to comfortable quarters to sprout; these will do duty in frames and pits without heat in February and also for the earliest borders in March. Ring-leader, Veitch's Ashleaf, Puritan, and Sutton's Seedling are all good for this purpose, the tops of the latter two being pinched when a foot high if grown in frames.

**FRENCH BEANS.**—January-sown batches of Osborn's Forcing and Syon House will make rapid progress, shallow boxes, where these can be accommodated, being the best receptacles. The

soil in these being only of moderate depth and not liable to become sour, a little artificial manure may be added, as the roots from the start will be able to assimilate it. Avoid earthing up, as it often causes wholesale rotting of the stems. Advancing crops must be supported by sprigs of Hazel or Birch.

**PROTECTING TENDER CROPS.**—Should sharp frost continue, dry Bracken or stable litter should be freely distributed along the tops of the Celery ridges, also between breaks of tender Broccoli, a portion of the same being laid on the tops of the latter and removed when a thaw occurs. Scotch and other Kales growing in isolated places must be inspected, as wood pigeons frequently do much damage before their presence is detected.

**JERUSALEM ARTHOCHOKES.**—Presuming that a sufficiency of these has been housed for present use, the remainder may all be lifted as soon as the frost goes and sorted. The smaller offsets may be covered with straw and ashes ready for planting in March, and the eating tubers stored away in soil in the root shed.

**AUTUMN-SOWN PEAS.**—In some gardens November sowing is still practised, and the growth will now need protection from cold frosty winds. Spruce or common Yew boughs form effectual screens if placed up each side of the rows. I have for years used troughs made of 12-inch deal boards, nailed together so as to form a span; these are placed quite over the rows in severe weather. A coat of tar every third season will prevent rot and preserve them for many years. Where early Peas were not sown in pots and placed in cold frames in December, they must now be sown; now, however, the pots must be placed in an early Peach house or similar structure, and there kept till growth is an inch high, after which they must be removed to a cold frame to harden off. Chelsea Gem and William Hurst as dwarf varieties, and Exonian and William the First in the taller section, are all good for early border work. A little seed of Stratagem may likewise be sown, as it is hardy and follows very closely on the heels of the first earlies, and there is no better Pea for quality or to fill the basket. Mice usually find out early sowings, whether in frames or in the open. The old-fashioned figure 4 brick or tile trap takes them sooner than anything else.

**DESTROYING WIREWORM.** In all gardens where wireworm is troublesome amongst Spinach or other crops, the present is a capital time to give a good dressing of gas-lime, the same being afterwards dug in. This will banish the pest, and allow sufficient time for its injurious properties to pass away before the spring crops are sown. While speaking of insecticides, I would add that the present time is favourable for burning up all sticks, fruit tree prunings and sundry garden rubbish, this affording a good supply of ashes for sowing in the drills of Onion and Carrot beds, for incorporating with heavy and unfavourable soils generally, and for sprinkling over Turnip and other crops when attacked by fly.

**ROOT ROOM.**—Inclement weather will afford an opportunity of overhauling the occupants of the root-shed. Carrots, being particularly liable to rot, must be first looked to, any that are partly decayed being laid aside for present use. Salsafy and Scorzoneria, if growing, should have the tops removed, or they will quickly rob the roots of vitality and cause shrivelling. The same may be said of Beet, but in removing the growth care must be taken not to injure the crown so as to cause bleeding. All seed Potatoes stored in cellars or outhouses must also be looked over and all sprouts removed; if lying thickly they should be spread out so as to avoid heating.

**HERBS.**—Roots of Mint and Tarragon should now be placed in boxes of soil or, failing these, large pots, as there is always a call for these in early spring. Some seed of Chervil may also be sown, so as to be on the safe side should it be asked for.

J. CRAWFORD.

**American Oaks.**—We have received the following from Mr. Meehan (once of the *Gardeners'*

*Monthly*) as regards seedling *PERNIX* grafted Oaks "The article you refer to was written by my brother Joseph, who has charge of one of the leading departments in our nursery, and has received very wide attention. There is something peculiar about grafted Oaks. Some of them do very well grafted; for instance, the upright variety of the English Oak will unite and thrive just as well on the ordinary English Oak stock as if it were raised from seed, but the blood-leaved Oak and several other varieties utterly refuse to live more than a year or two without becoming sickly. Undoubtedly it is best in all cases to raise them from seed. In this country, where it is so easy to get seeds of all kinds of Oak, there is, of course, no necessity for grafting, so that those we offer are seedling plants. Here in Pennsylvania, where we are between the most tropical and the more arctic parts of the continent, we never suffer much from heat or drought in summer or severe cold in winter; in fact, the climate of Pennsylvania more nearly resembles that of England than that of any other portion of the United States. It is only, as a general rule, from the middle of December until the middle of February that we are unable to do outdoor garden work, and very often we continue our tree planting until after Christmas."

#### BOOKS.

##### THE BOOK OF THE ROSE.\*

THE comprehensive title of this book is an illusion which its author very quickly dispels. A book of the Rose should surely treat of all the charming attributes of the flower, but Mr. Foster-Melliar looks upon the plant "only as a means of obtaining glorious Roses." As a decorative plant he does "not consider it pre-eminent," and to his mind "simpler, less beautiful flowers have greater value for general effect in the garden." From his own point of view, that of an exhibitor, he is able to teach, but, except in a few minor details of treatment, he has nothing new to tell us. There is plenty yet to tell about Roses, and though treatment from an exhibitor's standpoint has been dealt with, there is still room for a book about Roses which can be offered without apology, provided it appeals to and supplies the wants of the thousands of lovers of the queen of flowers who give it pride of place in their gardens and never trouble themselves about exhibiting. The Rose is unfortunate in its literature, because it is all one-sided and conveys the impression that the end of all Rose growing is the production of exhibition blooms. No one grudges the enthusiast his right to treat the flower as he likes, but the standard of requirements for show is so exclusive, that he who grows for this purpose alone has not a true idea of the varied beauty of the flower. So long as exhibitors of Roses alone teach Rose growing, their modes will be "erroneous and faulty," being altogether opposed to the development of the flower except as an individual bloom. Everything is restricted, and the few shoots and flowers, however fine in themselves, are but a miserable apology for the self-same Rose as grown as seen in the garden. To deify the flower on the ground of effect is absurd, as the commoner showy flowers only gave bright effects because they were massed in quantity, and if we take the best Tea, Monthly and other Roses and mass them accordingly, there is no other flower that will give more beauty in its season. Mr. Foster-Melliar is not without a good example in his vicinity, and if he had stood as I did one day last June on the terrace at Shrubland and looked upon those noble groups of Tea Roses that have replaced the wretched carpet bedding, I cannot but think in his introductory chapter he would have freely admitted that the Rose as a garden flower has great merits, and in its amazing profusion of bloom makes a picture.

\* "The Book of the Rose." By the Rev. A. Foster-Melliar. Macmillan and Co.

The second chapter deals with history and classification, and the author is guided by those who have gone before him, although there is much that is useless and confusing, owing to the retention of such groups as Boursault, which have no garden value. The statement (p. 21) that several other single species which bloom only once a year are only of value to the botanist or collector is quite in accordance with the erroneous ideas that the exhibitor puts forth, and a hindrance to the full realisation in our gardens of the varied types of Rose beauty. Thus the single Musk Rose, the sweetest and handsomest of climbing single Roses, is banished from gardens and beneath notice. 'Amongst Monthlies, Mrs. Bosanquet and Mme. Laurette Messimy are mentioned as about the only two worth growing, and this latter is condemned as a weak grower, when it is not. There is a bed of Monthly Roses and Lavender on the terrace at Shrubland that is gay for many months and brilliant at certain times. The bed does not contain either of the two kinds above mentioned, but those that are there are beyond question equal in beauty and effect to the best Teas, though less useful as cut flowers. Rosa lucida, a gem among single Roses, is classed on p. 26 along with R. microphylla and berberifolia as "not hardy, but evergreen where well protected," R. lucida being as hardy as the wild Bramble. The last paragraph of chapter 2 relating to garden Roses is not of much use, for it sums them up as "hardy, strong-growing, free-flowering sorts which do not require much care, but are defective as florists' flowers." This is curious considering that some of the very best Tea Roses for the garden are those that the exhibitor finds indispensable.

Situation and soil are fully treated of in chapter 3, but the ghost of tenderness once more stalks abroad, for "It is pretty well known that most of the Tea Roses are tender and likely to be injured or killed by severe frosts." After describing the various situations, and mentioning as worst of all one that lies low, near trees and water, and hardly above sea level, the author admits that it is in just such a situation he has to grow his Roses. In this valley of the Gipping the thermometer often falls to zero. The experience gained in such a place is surely not for general guidance, and the disasters that have followed are not lying in store for us all, as Mr. Foster-Melliar would have us believe. He calls Tea Roses "tender, delicate things." If they are, it is marvellous that the great growers around Colchester have any flowers to exhibit when the shows come round, and plants to sell later on. Yet there they are in countless thousands, in open fields exposed to all the winds that blow. Planting, manures and pruning are the subjects of the three next chapters, and are well and fully treated. Next comes one on stocks, and it is satisfactory to note that the Manetti is estimated at about its true worth. The Brier cutting is regarded with most favour, having less tendency to deep rooting; but as the seedling Brier stocks are once or twice transplanted before working when long roots are shortened and planting the plants after the directions given in the book, the differences must be more fancied than real. Propagation is the subject of chapter 8, and deals chiefly with the conventional methods, but we are told how to strike them, although this advice is preceded by the oft-repeated assertion that in the first place it takes longer to form plants, and, secondly, such Roses neither grow nor flower so well as those on stocks. With a few exceptions, they will grow and flower just as well on their own roots if we adapt our culture to the needs of the plant, one of the first of these being the need of a much lighter soil. As to the time occupied, if anyone will put in some Brier cuttings and Rose cuttings at the same time, he will certainly be cutting Roses from the own-root plants before there are any upon the plants that have been budded. This is a fair test of time, but not so when a cutting is compared with a bud put upon a crown of strong established roots. Easier and more rapid still is layering.

Shoots put down in early summer may be taken off in late autumn with quite an abundance of roots, the H.P.'s especially being of easy increase in this way.

Pests are well treated of and the best remedies suggested, whilst a short chapter follows on Roses under glass. Exhibiting has a special chapter, as the author thinks anyone who has followed his instructions previously given will be anxious to get an important judgment on his blooms. He exaggerates the views of those who are rather averse to Rose shows, for no one who knows anything at all about the flower would say that the "least lovely of Roses are most shown and encouraged." I fear the exhibitor takes a much narrower view of the whole matter by reason of his "high standard of excellence," for there are lovely Roses grown in gardens to-day that would never have been there if the shows and the showing people had been our sole guides and counsellors. The "manners and customs" of Roses form the subject of a very long chapter extending to nearly one hundred pages and illustrated with flowers of some of the best kinds, specimen flowers showing the form admirably, whilst the text treats of the merits and peculiarities of growth and flowering. A chapter follows on selections for various purposes, and though no two compilers might be expected to agree on this, it is surprising to find Bouquet d'Or placed sixth in the order of merit in a selection of twelve Roses for a wall, and precedence given to Maréchal Niel (ever uncertain) and Reine Marie Henriette. For perging down some advised are useless, as La France and Gloire de Margottin, whilst one of the very best, namely, Mme. G. Luizet, is not mentioned. The final chapter contains a calendar of operations for each month in the year. It is a useful book to put into the hands of a beginner, and will be an all-sufficient guide if his ultimate aim is prize-winning. The style and arrangement are admirable and the printing good, but the illustrations are processes of a poor sort. A. H.

FLORA ODORATA: OR, SWEET-SCENTED FLOWERS AND FRAGRANT LEAVES.\*

THE object which this little volume so well fulfils is to give concisely, and in the most convenient form for reference, what was greatly needed, namely, all necessary practical information about the sweet-smelling flowers, shrubs and plants which are found in our gardens, fields and hedges, not excluding those which come to us from other countries and climes from America, the East, Australasia, and are not hardy in these islands, like the Olearia, Eucalyptus and many others. In the "historical sketch" which precedes the main alphabetical list of sweet-smelling plants—which is the main purpose of the book—there is a great deal of interesting matter concerning the use of sweet-smelling flowers and herbs in the distillation and manufacture of perfumes from the earliest recorded times, and also the association of aromatic plants with the religious and social observances of the most ancient peoples. Thus in the East "scented flowers and the shade of perfumed trees were considered one of the most indispensable enjoyments of the higher classes of society," as they are now in fact; and again, "the luxurious and refined habits of the Assyrians involved the use of perfumed plants to an excess," and we read of one potentate who, driven to extremities by continuous defeat, "caused a pile of fragrant herbs to be lighted, and, placing himself with his wives and treasures upon it, all were swiftly suffocated with aromatic smoke." The Egyptians also made the most luxurious use of fragrant incenses, and the Greeks "ascribed a divine origin to perfumes." Sweet-smelling flowers—the Rose particularly—play a prominent part in Eastern fable. Later and in our own country the poets are seldom

\* "Flora Odorata: or, Sweet-scented Flowers and Fragrant Leaves." By Donald McDonald. With an Introduction by W. Robinson. Sampson Low, Marston and Co., Limited.

happier than when telling of the beauty of our native flowers. It is, perhaps, not generally known that the once much used, but now rather out-of-date, scented Patchouli comes from an Indian herb of that name, and from a tree found on the islands of the Indian Archipelago comes the perfume known as Ylang-Ylang, which name signifies "The Flower of Flowers." The attar of Ylang-Ylang is more costly than even the attar of Roses, and the odour of the tree is so powerful that it scents the air for miles around. The chapter on the sweet Violet is very interesting. American Violets, it seems, are scentless, though the flower "in all its fragrance blooms beneath the Palm trees in many lands. The sweet Violets of Palestine blossom with the Narcissus and the Hyacinth in the opening month of the year, and at that time, too, the women of Aleppo gather them to adorn their dark tresses." The book is well printed, and I heartily commend it to all interested in the subject. C. F.

A DICTIONARY OF HORTICULTURAL TERMS.\*

THE want of a good polyglot dictionary of horticultural terms is often felt by English readers of foreign horticultural journals when they meet with technical gardening terms the explanation of which is not to be found in any ordinary dictionary; and, similarly, foreign readers of our English horticultural papers must frequently be equally at a loss in this respect. Under these circumstances, we hailed the announcement and subsequent receipt of the present volume as of something to be thankful for.

The gratitude, however, which we had thus prospectively entertained was turned into disappointment when, having gone carefully through the book, we found that it is not of the slightest use to anyone who may want to ascertain the French, German, or Dutch equivalents for even such common horticultural terms as layering, mulching, standard, espalier, bell-glass, and many others, not one of which is mentioned in its pages. In fact, notwithstanding its title, the book is singularly deficient in horticultural terms, as in its eighty-three pages we have failed to discover more than thirteen of such terms, viz., cutting, fork, frame, fruit-garden, grafting, grafted, grafter, graft, greenhouse, hotbed, mattock, nursery, trellis. Instead of supplying useful information of this kind, the author gives us in the first of the five columns into which each page is divided an alphabetical list of such Latin and Latinised-Greek words (mostly adjectives) as occur in purely botanical descriptions of plants, and of which the bare and general meanings, as given by him, can be just as readily found in an ordinary Latin dictionary. Hence we fail to see the *raison d'être* of the present volume, and are utterly at a loss to know why it also contains such words as nitrum, saltpetre; statutum, statute; and vaccinatio, vaccination.

The task of compiling a good polyglot dictionary of horticultural terms is still open to anyone who has the courage to attempt it and the facilities for carrying it out. Books on the subject, if he can get them, will be only a partial aid to him, but a visit to some of the great continental horticultural establishments, with a complete list of our English horticultural terms and note-book in hand, would enable him to furnish himself with equally complete and correct lists of equivalent foreign horticultural terms.

The plan of such a dictionary, to be really useful, should be different from that of the present volume, which only gives an alphabetical vocabulary of the Latin words in the first column, followed by their meanings in English, French, &c., across the page. A proper polyglot dictionary of horticultural terms should be divided into as

\* "Dictionnaire Latin-(Grec)-Français-Anglais-Allemand-Hollandais des principaux termes employés en Botanique et en Horticulture." Par A. M. C. Jongkindt-Connex, horticulteur à Bussum, près d'Amsterdam. Haarlem. 1894.

many sections as there are languages represented in it, the terms of each language being arranged in alphabetical order in the first column of the pages devoted to the section of that language. It would then be easy for a Frenchman, say, to find in the alphabetical arrangement in the first column of his section any French term of which he wanted to know the equivalent in any of the other languages and which he would then find in a line with his own term in its proper column on the same page; and similarly in the case of an Englishman, German, &c.

Awaiting the advent of such a polyglot dictionary of horticultural terms as we have here endeavoured to give an outline of, we cannot conclude the present remarks without expressing our regret that the volume before us, the title of which had led us to expect much, should, upon examination, have turned out to be so lamentably deficient in technical horticultural terms and so unsatisfactory in its plan of arrangement. W. M.

## FLOWER GARDEN.

### AMARYLLIS BELLADONNA.

THERE are few more taking sights than a border with several hundred scapes of this lovely *Amaryllis* in bloom under an autumnal sun. Such an one, extending the length of a range of glasshouses and containing over a thousand bulbs, I saw in 1893. I was told that never before had the flowers been so abundant, and quite believed the statement, as the flower-heads formed a 2 feet high cushion of pink and white, unbroken throughout the length of the long narrow border. Whatever may have been the case in other parts of the kingdom—and from Mr. J. Wood's note (January 13, 1894) it would seem that in some districts the season of 1893 was not productive of much bloom—I believe that in the south-western counties, at any rate, bloom was exceptionally profuse, while in four cases that came under my notice the crop of flowers was admittedly a best on record. Last season the four borders in question produced but a scanty show.

There is more than one variety of the *Belladonna Lily*, that figured in the accompanying cut being an exceedingly beautiful form. Seven years ago I brought home from the Cape of Good Hope one bulb which has now increased to six. The individual blooms are very gracefully shaped, the petals recurving far more than



The *Belladonna Lily*. Engraved for THE GARDEN from a photograph sent by Mr. S. W. Fitzherbert, Torquay.

in the ordinary variety, and their colour, instead of white, with a well-defined dark pink edging, being of a uniform flesh colour. The individual flowers are also larger and borne in greater numbers on the scape, one scape this autumn carrying fourteen blooms, and two others thirteen each; the scent is also of a rarer fragrance.

The bulbs in question have always been in pots, being kept in a moderately warm house

whilst making their growth, transferred to a cold frame when the foliage has died down, and, finally, put into a cold greenhouse as soon as the flower-spike showed. When in flower these, or plants of the common form, are excellent for rooms, lasting in beauty from two to three weeks.

In its natural habitat this *Amaryllis* blooms from January till March, at which time *Vallota purpurea*, which is found in quantity in the same region, is also in bloom. On being imported it will often be found that the first flowering will take place in the spring, but gradually, owing to the insistence of a changed climate, the blooming period will be later until it becomes autumnal.

A soil composed of loam, leaf-mould and sand in equal quantities will be found most suitable, nutriment being supplied during the period of growth in a liquid form.—S. W. F., Torquay.

— Why so handsome a plant should be so seldom seen it is very difficult to say, the more so as we see species and varieties of plants far less ornamental and much more difficult to manage, taking up valuable space and time. When once planted in the proper position there is only one thing necessary to ensure success, and that is to let the bulbs alone. Some amount of patience is, however, necessary while the bulbs are becoming established, this taking from three to five years, and depending to a considerable extent on the size of the bulbs when planted. Once they are established they should not be disturbed for years, when they will each year be a source of pleasure and increased beauty in any garden. The position the bulbs should occupy is of considerable importance, and there is no better place than at the foot of a wall with a south aspect. In such a place they will be dry, warm, and well drained, which are the more important details to success. A good depth of soil also is of primary importance. The soil should if fairly good be dug to a depth of 3 feet, or, failing a sufficient depth of soil, it will be best excavated to this depth and replaced by suitable material. Rough, lumpy peat and good fibrous loam of a somewhat stiff character, in equal parts, may form the bulk. To two barrowfuls of the above add one bushel each of partly decayed leaves and old mortar rubbish. Six inches or thereabouts of brickbats to form a drain should be placed in first, laying some rough soils of turf cut thick over the drainage, then fill in the soil to about 18 inches of the surface. At this point turn in some partly decayed cow manure, adding 3 inches more soil and mixing the whole together in the trench. Now add another 3 inches of soil without manure, and having made the soil firm, plant the bulbs

—that is to say, the base of the bulbs should be from 10 inches to 12 inches below the surface, the bulbs themselves being of large size. Place a layer of sand at the base of each bulb and also surround the bulbs with the same material. In covering the bulbs make the soil quite firm. The best time in the year to replant this *Amaryllis* is the month of June, though bulbs in the dry state may be obtained at the present time from the best dealers. These should be planted at once. Some may think possibly that this plant requires a good deal of trouble, but no one who has seen the grand masses of it flowering beside one of the *Orchid* houses at Kew could ever regard any trouble too great to secure similar results. Here may be seen bulbs producing two, three and sometimes four spikes each, the latter rising to nearly or quite 2½ feet high, bearing as many as seven or nine flowers in an umbel.

Some of the rose-pink shaded flowers are extremely delicate, while others are equally showy in their purple-red tints, and others, again, are white, washed or suffused with satin-pink. Where healthy and good bulbs are planted at the start, these will become established in a year or two and give no more trouble beyond watering them in their growing season and occasionally with liquid manure.—E. J.

### ENOOTHERA MARGINATA.

THE illustration represents this charming variety of the Evening Primrose as growing on a sunny bank in Messrs. Veitch's nursery at Exeter. In spite of the past somewhat unfavourable summer the plant flowered most abundantly throughout the whole season, producing a fresh flower or two nearly every day. The individual flowers, fully 4 inches to 5 inches in diameter, are of the purest white, with just a faint touch of pink on the under side of the petals. The plant is rather



*Enothera marginata*. Engraved for THE GARDEN from a photograph sent by Mr. F. W. Meyer, Exeter.

susceptible to too much moisture on the foliage, and therefore succeeds best when planted on sloping ground. At Exeter, Torquay, Newton Abbot and other places *Enothera marginata* is growing in rather heavy loam, in which it seems to thrive remarkably well. It is a valuable plant for a sloping border or for the rock garden. It does not grow more than 8 inches or 9 inches in height, but spreads out sideways rather rapidly when once established, and should therefore not be associated with the smallest alpinists.—M.

— On the rockery at Carleon, Killiney, Co. Dublin, there is quite a remarkable colony of this fine plant. It was originally planted on a bed raised about 2 feet above the common level by supporting stones, and, probably pretty well planted at first, it has extended to the right and left, has gone backwards, come over the stones and crept down to the walk below, covering a space of about 8 feet square each way. In the genial climate of this neighbourhood it flowers in the freest possible manner all through the season, and is quite one of the most admired plants in this well-stocked garden. Another probably unique rockwork plant to be seen here is *Rhynchospermum jasmoides*, pegged down and covering quite a large space, much cleaner and more healthy than one generally sees in greenhouses.—T. SMITH, Newry.

**Lobelia fulgens.** — My plan is to take up the plants about the beginning of October and to put six or eight together in a seed-pan, some soil being left attached to the roots. They are put into a somewhat sheltered cool place and left there for three weeks; after this they are housed, and two weeks later the stems are cut or broken off close to the soil. The house is kept just above freezing



and moisture moderately given. Thus they remain until the middle of January, when they are divided, brought to the warmer house, and plunged in a border of coal ashes which is slightly warmed by a flue from underneath. In three weeks they are established, when they are hardened off and brought to the greenhouse. In this way I do not lose any by rot.—MAX LEICHTLIN, *Baden-Baden*.

**Corydalis cava var. albiflora.**—This is a very pleasing white form of the hollow-rooted Fumitory, and coming very early into bloom is very useful in spring gardens. It was a great favourite with the late Mr. William Ingram at Belvoir. It forms an excellent companion to the species which produces purple blossoms from February to May. Provided the soil be not too dry the *Corydalis* will flourish under trees. The yellow *Corydalis* (*C. lutea*) is a well-known plant, but it is later in blooming than *C. cava* and its white variety.—R. D.

#### WILD PRIMROSES.

THE early winter of 1894 has been exceedingly mild and pleasant. One marked peculiarity has been the abundance of wild Primroses. For some reason, which I can never quite understand, Primroses and Polyanthuses are generally fairly plentiful in our gardens through November and December—that is, if the weather is at all favourable to their development. But wild Primroses in the hedgerows and woodlands are usually not to be found till the warm sunshine of the end of February or March has brought them out timidly to greet us in our walks. I remember once when quite a lad out shooting on the cliffs near Fowey, in Cornwall, on New Year's Day, I came across a bank which was yellow with a mass of early Primroses; but that was in the far west in a sheltered nook, and I have never met with anything like it again till this year. This year the same thing has actually occurred in Gloucestershire. In a certain wood, protected from the north and east, Primroses have been flowering profusely all through November and December, so that not merely a few isolated blooms could be picked, but baskets have been filled with the delicious fragrant flowers. This is certainly a very strange phenomenon, quite unprecedented in the memory of anyone living in the neighbourhood, and therefore not to be explained merely by the fact of a mild winter, because we have had many mild winters, but no wild Primroses. I think possibly the explanation is to be found in the great drought of 1893. This is an exceedingly good country for Primroses usually, but last spring they were very scarce, so much so, as to strike one in walking through the country lanes, and still more in the woods and orchards, some of which are usually carpeted with a mass of Primroses. It seems to me that the great check thus experienced prepared the plants for an earlier bloom in the following season than is their wont; and when a mild November and December promoted growth, the pent-up vigour burst out into the extraordinary display of bloom we have lately had. If so, it might enable us to control the flowering of other things by keeping them without water. But drought was not the only peculiarity of 1893; the great heat has also to be taken into account. I lost quantities of Primrose plants in the beds in my garden. They withered with the heat and drought, recovered slightly after a summer shower, but only to fall off into a worse condition when the dry weather settled in again.

I must tell you that the cottagers who live in the wood from whence this strange crop of Primroses has been gathered have a different

theory to account for it. They say that the plants were trampled down by horses drawing wood last spring, and that promoted their growth at an unusual time. I do not think that this would account for it. I do not suppose that any of your readers have ever seen baskets of fine, healthy Primroses, such as we generally find at the end of March and beginning of April, gathered in the woods at Christmas. I have never heard of such a thing before, and I think it is worth while recording the fact.

I wonder what they would have thought of them at Covent Garden done up in sweet little button-holes, with tiny fronds of wild Fern just tinged with russet, but fresh and green otherwise, and nestling in a surrounding of beautiful Moss. I have plenty of *Odontoglossum Rossi majus* in flower at the present time in the greenhouse, but I would rather have a button-hole of these unexpected Primroses than even one made of that beautiful Orchid. There is nothing like the fresh scent of the wild flower from the woods, unless possibly it may be the peculiar and delicious fragrance from the curious little flowers which grow on the bare stems of *Chimonanthus fragrans* at this time of the year. I have a saucer full of these precious flowers by my side as I sit by the Christmas fire, and every draught caused by the slightest motion in the room wafts that wonderful scent across one's face. Yet how few people know of its existence.

#### A GLOUCESTERSHIRE PARSON.

#### THE QUILLED GERMAN ASTER.

I THINK the quilled German Aster is beginning to be more generally recognised as a valuable type for cutting than it was a few years ago. Of late years there has been a tendency to grow larger Asters, of which the Comet is the latest type, and a kind of reaction against these grosser forms is setting in. For beauty, symmetry, chasteness and variety, the quilled Aster—provided, of course, the strain is good (and there is a difficulty in obtaining one at the present day)—is unequalled, if we except the bouquet varieties among the flat petalled types. It may be objected to that the growth of the quilled Aster is rather tall and the flower-stems spreading, yet a line of plants of uniform height and quality is a very pleasing object in a garden. The stems are long, stout and rigid, and therefore particularly well adapted for cutting, and they endure fresh and bright for some time in a cut state.

As an exhibition flower the quilled Aster is very attractive. In the west of England one sees them at their best. The shows held at Taunton, Bath, Trowbridge and other western towns bring together superb stands of this flower, produced by means of good cultivation. The quilled Aster bunches well, as has been demonstrated at some of the meetings of the Royal Horticultural Society—much better indeed than some of the large flat-petalled types.

Those who grow for exhibition sow the seeds thinly in the month of April, using pans of very rich soil, with a mixture of leaf mould and a liberal allowance of sand. The pans are placed in a cold frame and the lights kept closed until the seedlings appear above the surface, and as they increase in size water has to be given carefully, with an abundance of air to make them stocky. When the plants show the second and third leaves it is the custom to prick them off into boxes of similar soil, the plants 2 inches apart, keeping them close for three or four days, and then exposing them by day, but protecting them from late frosts at night. Care is taken to get the plants as sturdy as possible, and when they are 3 inches in height, and before they show signs of sending up a stem, they are planted out where they are to flower, generally in lines 20 inches apart, the plants a foot apart in the lines. The

bed is made of rich soil, and some cultivators prefer strong pig manure to any other, as it appears to impart size to the flowers. Stakes are placed to the plants. In order to have fine blooms for exhibition, a covering of light canvas is employed, not only to ward off hot sun or rain, but to assist the flowers in developing gradually. Plants grown in this way will supply an abundance of bloom from the first week in August until the end of October. As a matter of course, the plants are freely watered when necessary.

The plants do not require continuous sunshine to flower well, but they may be said to revel in cloudy, dry days and abundant night dews. It may be added that under ordinary garden culture the plants should be in rich soil and have an occasional dressing of some artificial manure. It is astonishing how many blooms a plant will produce, and they last for a long time when placed in water. Of varieties there are many. Some are self-coloured, including the new yellow variety shown by Mr. Henry Cannell last summer: some are mottled in two or three colours, and some are rendered parti-coloured by having two distinct zones of colour, but all are very attractive and well deserving of culture. R. D.

#### FLOWER GARDEN NOTES.

HERBACEOUS PLANTS.—The exceptionally mild autumn and early winter, together with a heavy rainfall, have been answerable for early growth on nearly all herbaceous plants, and those who did the necessary amount of division and replanting towards the close of the year were well advised. Of course, such work may be continued, given open weather through January, and those things which most readily submit to division will grow and flower fairly well through the next summer if the work is carefully performed, but in the majority of cases it may be safely asserted that root-disturbance is not advisable when growth is moving strongly. Such things as *Pyrethrums*, perennial *Sunflowers* and *Starworts* will bear late division, for either the root massing is so pronounced that the severance is not severely felt, as with *Pyrethrums*, and in the case of late-flowering plants growth is as a rule proportionately late. In all planting of herbaceous things, especially in the case of late removals, a good surface mulching is necessary. Ground left quite unprotected will be so pulled about by frost as to check the quick formation of new roots, and it will also dry out very quickly given an early spell of sunshine and drying winds. In connection with the general planting of herbaceous things, it may be noted that the question of special places for different families is not always such an important point as suitability of soil and the endeavour when special requirements are mentioned to meet the necessities of the case by making the best of existing conditions. The planter need not despair of doing justice to some particular family even if he has in the ground he is working no place he may think naturally suited to its successful cultivation. It may mean the addition of a heavier or lighter compost to the natural soil, a little excavation, draining, something to raise the plants above the natural level, or a heavy winter mulching, but in any case the desired end is generally effected without a deal of trouble. I remember when starting the naturalisation of *Daffodils* in our pleasure grounds it was considered that the shallow soil resting on sand was likely to be against a long life for the bulbs. A careful examination, however, proved that the sand was of a damp, fairly holding nature, and as this formation is a characteristic only of the higher parts of the grounds, the incomparabilis family were planted here and have done fairly well, whilst the trumpets found a home in stiffer soil and in lower sites.

If any alterations are necessary on lawns they should be put in hand at once if not already done. They may possibly include the enlargement of some beds, the filling up of others, and the removal of any objectionable objects. In the latter case the absolute necessity of dispensing with anything in the way of tree or shrub that is

seraggy and unhealthy and never likely to develop into a nice specimen cannot be too strongly enforced. The argument is sometimes advanced that such things are valuable as rare plants. This, however, does not justify their retention in any prominent place; they should be removed to a hospital in some out-of-the-way corner where they may have a chance of recovering, and their places be filled with healthy plants. The enlargement of beds should be specially considered in connection with those parts of the garden that may lie at some distance from frequented paths and where it is deemed advisable to have a bright display, small beds and dwarf planting being under these conditions worse than useless, and a Grass bank or a belt of greenery decidedly preferable. Such places are suitable for the employment of high-class shrubs, possibly in connection with tall perennials, as, for instance, the double-flowering Deutzia with Delphiniums and Hydrangea paniculata with the hardy Fuchsias. Many of the Star-worts, also the Sunflowers, as Helianthus multiflorus plenus and Soleil d'Or, are also well suited for such positions. In connection with the enlargement of beds it may be noted that even on small lawns a few beds of fair size are always preferable to a host of little beds, the flower gardener can plant to much better advantage, and in all cases a goodly proportion of green carpet between the beds renders the planting all the more effective. If any trees of considerable size are removed from the lawn and it is not deemed advisable to replace them, a portion of the stump may remain to be clothed with some climbing plant, one of the Clematises or Ceanothuses, or a good rambling Rose like Aimée Vibert. The last named where it clothes an old stump of Pinus Cembra and forms a dense bush 7 feet high and 15 feet in diameter is in its season decidedly the most attractive feature in our flower garden. Formal geometrical gardens are now the exception rather than the rule, but if a new design is to be laid down or any alterations are proposed to plans that already exist, the work should be pushed forward when the weather is suitable. Whether the garden is to be cut out on turf or the edges of the beds are to be of Box, with intervening walks, the plan, if somewhat complicated, should be drawn to a scale, and then if the ground is marked out on similar lines the gardener has little difficulty in transferring even the most elaborate designs from paper to the soil. In cutting out and laying turf or Box the work should be accurately performed.

If a decision has not already been made as to the numbers and varieties of tender plants required for summer planting, no time should be lost in doing so; it is useless blaming the propagator for deficiencies unless he knows accurately what is required of him. It may be well at this time to recall the general aspect of the flower garden in 1894 with the view to remember success and failure. Personally I am inclined to give extra prominence this year to Antirrhinums, Fuchsias, and Violas, and to considerably reduce the number of zonal Pelargoniums. The stronger growing varieties of these were a failure in 1894, the damp summer being conducive to rank growth, but very little flower; in fact, all through the sunless time one might visit several beds without finding a properly developed truss. Begonias were considerably better than in 1894, except the very large-flowered varieties, which were much beaten down by the rain. E. BURRELL.

Claremont.

**Variiegated Sweet-scented Tobacco** (*Nicotiana glauca* var. *variegata*). This variegated form of the popular Sweet-scented Tobacco should prove a welcome addition to those who are fond of variegated foliage. It is equal in size to the green kind and the leaves are prettily variegated with white, which will contrast well with other plants.—W.

**Saxifraga ligulata**.—One is sometimes asked to name a plant that will do well under trees. It must be admitted that the choice is limited, and there are but few subjects which flourish under the shade of overhanging boughs. When I was at

Belvoir Castle in the spring of 1893 I could not help being struck with the appearance of *S. ligulata* doing so well under the shade of Yews. It was flowering with great freedom, as it usually does in this position, and it is worth noting as useful for such a purpose.—R. D.

## STOVE AND GREENHOUSE.

### RICHARDIA REHMANNI.

(THE ROSE-COLOURED ARUM LILY.)

A REALLY rose-coloured Arum Lily with flowers the size of those of the common *Richardia aethiopica* would certainly prove a most acceptable and serviceable addition, but, alas! this phenomenal plant still remains to be discovered, and for the present we shall have to be content with the subject of the accompanying engraving, which represents a vigorous example of the new *Richardia Rehmanni*, a true Arum Lily, although differing entirely in aspect and stature from the everywhere familiar Lily of the Nile



*Richardia Rehmanni*. Engraved for THE GARDEN from a photo sent by C. G. Van Tubergen, Jun.

(*Richardia aethiopica*). As shown in the engraving, the foliage of this plant is one of its most distinct characters, being lanceolate in form and resembling the foliage of some of the members of that group of plants, the Scitamineae, to which Cannas, &c., belong. The flowers of the *R. Rehmanni* are of about the size and shape of those of the well-known *R. albo maculata*; in my plants the buds were streaked with chocolate-brown, and the spathes on unfolding were in the inside of a shade of rose colour, as one sees in soft coloured forms of *Lycaste Skinneri*. Contrary to "W. W.'s" statement in his description of this plant on p. 447 of last year's issue of THE GARDEN, the flowers of my specimens retained their rosy colour to the last, the spathes turning to a greenish colour on reaching maturity. This difference is perhaps due to the fact that the plants which flowered at Kew and at Cambridge had been introduced from Natal (between 28° and 30° of latitude); whereas I received my bulbs from a friend living as far north as 24° latitude. My plants are now ripening seed freely, and as the flowers were all

fertilised artificially, I am not without hope of eventually raising some more highly coloured forms. C. G. VAN TUBERGEN, JUN.

**Roman Hyacinths.**—It is very gratifying to find "Grower"—see page 12—referring to the very satisfactory flowering of his bulbs this season, a fact alone which speaks volumes for their general culture. So satisfactory a state of things could not possibly have resulted from anything but thoroughly matured bulbs, in the first place, and, secondly, from none but bulbs of first quality. I had almost said bulbs of "first size," but too frequently in these things mere size does not denote quality. "Grower" thinks it possible to over-estimate the importance of thorough ripening. Here I cannot agree with him. He must remember that though the year 1894 was by no means noteworthy for sun or heat in England, we have not to depend on our own season for the growth of these Roman Hyacinths which we receive each year from naturally warmer and sunnier climes. The very early date at which we receive supplies each year fully illustrates the greater natural warmth and a much earlier season than our own. The all-important period for these bulbous plants resolves itself into the narrow limits of about three weeks, during which the germ of the ensuing season's flower is laid. Provided there is at this particular season a sufficiency of sun and warmth, then all is well, but if this essential—and I regard it as absolute—is wanting, so will the flower-spikes also be wanting in quantity and quality. If "Grower" doubts this, let him secure some of the best Roman Hyacinth bulbs another season as soon as they come to hand, plant them in an English garden and grow them there a full season. In the following year let him force these beside the annually imported ones, and see for himself the difference.—E. J.

**Wallflowers under glass.**—Those who have cold frames to spare during the winter might do worse than fill them with Wallflowers. If the plants are well grown, such early blooming varieties as Harbinger and Early Paris Market will form buds early in the autumn, and with protection will open their flowers during the winter and early spring. After some winters a few dozen Wallflowers cared for in this way are of great use. It not infrequently happens that a severe winter very much retards and sometimes kills Wallflowers in the open air, and then one is glad to be able to gather a few nice heads of bloom from sheltered plants. Bitter winds with bright sun are also apt to prevail in March, and plants protected will then give blooms fine in colour and rich in fragrance. Seed should be sown early in March in the open ground, setting out the young plants as soon as large enough to handle in the most exposed position in the garden. Give them ample space to enable them to make a sturdy growth and well ripen it and lift them carefully early in November. The old-fashioned double yellow Golden Drop is as worthy of a place under glass as many things more in fashion at the present time. Cuttings of this variety root readily. The plants should be grown along in pots in the open air, getting them into 7-inch pots in early summer. They will in this condition bear a little forcing, and will produce large fragrant spikes of bloom quite early in spring.—J. C. B.

**Bouvardias.**—At one time Bouvardias could be well grown within the London district, but now with the great increase in bricks and mortar the fogs experienced during the autumn and winter are far more sulphur-laden than they were formerly, and as a class Bouvardias are the first to suffer under such conditions. They will grow well enough during the summer months, and consequently in the early autumn good flowering examples may be had, which will behave in a satisfactory manner till the fogs come, when a few hours will suffice to transform a house of thriving plants into a mere wreck. The flowers do not suffer to anything like the same extent as the foliage, for every leaf presents such a burnt appearance as if it had been exposed to a fire.

Even on plants that have been so injured the flowers will open fairly well, so that a few years ago when Bouvardias were grown in quantity by our market growers almost in London itself, I have seen a house of them yield a fair return in the shape of cut bloom, while nearly all the leaves had been killed. The difficulty attending plant cultivation in or around London increases every year, and it is no easy matter to keep some plants alive which a few years ago could be grown in a satisfactory manner. Besides Bouvardias, such plants as Pelargoniums will lose a great many leaves, Indian Azaleas will often become nearly bare, and many of the flowers refuse to open properly. Rhododendrons of the Javan group will, if a suitable temperature is maintained, flower well in the winter despite the fogs, but the numerous garden varieties claiming parentage chiefly from the Himalayan *R. ciliatum* and *R. Edgeworthii* cannot always be so thoroughly depended upon, for though in most seasons they bloom well, yet a fog of unusual density will sometimes cause many of the hard prominent flower-buds to drop.—H. P.

SHORT NOTES.—STOVE & GREENHOUSE.

**Bambusa Fortunei foliis aureo-variegatis.**—In Messrs. Peed and Sons' nursery at Tulse Hill this pretty ornamental little plant is grown in quantity, and is very attractive in such a small state. The bright golden variegation is very fine and contrasts well with small Ferns and other plants when used in small rustic vases. For this work and other indoor decorations it is admirably adapted.—W.

**Lapageria rosea** (Nash Court variety).—Undoubtedly the finest variety of this magnificent climber is the one known as the Nash Court variety. In the nurseries of Messrs. Laing at Forest Hill a magnificent specimen in full flower covers a large portion of the roof of one of the houses. It is very free-flowering and robust in growth, the individual blooms being very large and of an intense deep shade of colour.—G.

**Begonia Arthur Malet.**—This Begonia, belonging to the class with ornamental foliage, is very effective for greenhouse decoration. It is of easy culture, requiring during the winter months a temperature of about 55°. In addition to the brilliant display made by the foliage, the plants when in good condition continue to flower as long as they are kept growing. It appears to be a great favourite and likely to hold its own for some time to come.—W. H. G.

SOCIETIES AND EXHIBITIONS.

ROYAL HORTICULTURAL SOCIETY.

JANUARY 15.

THIS, the first meeting of the year, was not an extensive one; in fact, its extent was appreciably below that of several of its more immediate predecessors. What was lacking, however, in this respect was amply compensated for in the several features of interest amongst the Orchids and other exhibits, notably the Primulas shown by the Reading firm, which gave abundant proof of the care bestowed upon the selection and hybridisation of this most useful winter flower. Of the Orchids, as far as certificates were concerned, it was almost entirely a field day for hybrid *Cypripediums*. Eight of the hybrid Slippers received awards of merit, and others were shown which a few years ago would have easily won that distinction. Several fine forms of *Lælia anceps* were shown from various sources, whilst the earlier of the spring-flowering Dendrobates were present, prominent amongst which were some of the choice hybrids raised at Burford Lodge. A very good plant of *Cymbidium Traceyanum* was exhibited with a spike of about ten of its scented flowers. This is the first plant that has been shown of this Orchid since that from The Dell collection, although one other from the same source as the present one was lately sold by auction in the City. The work of both the floral and the fruit com-

mittees was comparatively light, particularly that of the latter, by whom no awards were made to any new productions.

Orchid Committee.

Numbers of small exhibits were exhibited here several of which were cut examples, regard being had no doubt to the wintry weather of the past week or two.

A first class certificate was awarded to—

**LÆLIA ANCEPS CRAWSHAYANA**, of which a very fine spike of half a dozen blooms was exhibited. It is quite a major form of the type, having large flowers with unusually broad petals and long sepals, which were suffused with a deep rosy purple tint, deeper than in the species, the lip at the same time being well marked with rich violet-crimson. From Mr. De Barri Crawshay, Rosefield, Sevenoaks.

Awards of merit were voted to—

**CYPRIPEDIUM J. H. BERRY.**—A cross between *C. Harrisianum* superbians and *C. concolor*, the influence of the latter parent being most apparent in the contour of the flower, the petals of which are very broad, the lip large, also the dorsal sepal, the markings being rich purple of divers shades, the darkest colour being seen in the upper sepal, a shading of pale green helping to set the flower off to better advantage. From Messrs. Sander and Co., St. Albans.

**CYPRIPEDIUM MME. JULES HYE.**—Undoubtedly a hybrid, although the parentage was not given. It has the character of *C. Leeanum* in a measure, also of *C. Spicerianum* in the form of the dorsal sepal; the flower was remarkable for its bold and massive appearance, as well as its rich colouring. The lip was extra large and of a dark bronzy shade, the dorsal sepal also large, reflexed at the base and marked with dark vinous purple, a darker line of which ran through the centre, the base being green; the petals were broad and rounded at the extremities, bronzy green, with darker lines. From M. Jules Hye, Ghent.

**CYPRIPEDIUM NITENS SUPERBUM**, of which hybrid it is a very superior form with larger and brighter flowers, the dorsal sepal being finer and more distinctly marked, whilst both the sepals and petals were of a deeper colour. The plant to which this award was made bore five large flowers, the growth being vigorous. From Mr. W. Cobb, Dulcote, Tunbridge Wells. A smaller plant was also shown by Messrs. Sander and Co.

**CYPRIPEDIUM NORMA** (*C. Niobe* × *C. Spicerianum*).—From such a cross this could scarcely fail to be a very handsome and distinct seedling; the dorsal sepal showed the influence of the latter parent in shape, being shaded with vinous purple and darker lines on a white ground; the petals resemble those of *C. Niobe*, being drooping, as in *C. Fairricanum*, one of the parents of the latter hybrid. These are shaded and veined with dark purple; the lip is of a dark bronzy shade. From Messrs. J. Veitch and Sons, Chelsea.

**CYPRIPEDIUM MIMOSA SUPERBIENS** (*C. Arthurianum* × *C. Spicerianum*), in which hybrid *C. Fairricanum* was again traceable, it being one of the parents of *C. Arthurianum*, the petals possessing the characteristic drooping tendency, but much darker in colour, a dark bronze-purple on a light yellow ground; the lip is that of *C. Spicerianum*, so also is the dorsal sepal in shape, being large and marked with dark purple in spots and lines, the base being green, the broad margin white. From Messrs. J. Veitch and Sons.

**CYPRIPEDIUM HENRY GRAVES, JUNR.** (*C. Lawrenceanum* × *C. Marshallianum*?).—A very distinct and in some respects singular hybrid, the lip creamy yellow and rather small; the dorsal sepal has the features of the former parent, with much of its colouring, but more diffused, the petals being darker and sparsely spotted. The plant shown bore evidence of a vigorous constitution. From Mr. Henry Graves, Orange, New Jersey, U.S.A.

**CYPRIPEDIUM MRS. FRED HARDY** (*C. superbians* × *C. bellatulum*), to which in a measure been imparted the form of the latter parent, with

its broad petals and spottings of a similar colour; the lip is that of *C. superbians*, but if anything smaller, with bronzy veins and greenish white base; the dorsal sepal is very distinct, with dark veins and lines, a sturdy looking and very promising hybrid. From Messrs. Sander and Co.

**CYPRIPEDIUM MADAME GEORGES TRUFFAUT** (*C. ciliolare* × *C. Stonei*).—A noble-looking and very fine hybrid, with much of the features of *C. Morganæ*, but darker in colour throughout. The spike bore two well-developed flowers. The influence of *C. ciliolare* is most apparent in the lip and in the deeper colour, whilst *C. Stonei* is clearly seen in the pointed dorsal sepal which is of a dark bronzy-purple in lines and spots on a light ground. The petals are broader than in *C. Stonei*, but of the same character, being also much darker in colour. From Messrs. Sander & Co.

**ODONTOGLOSSUM NEBULOSUM CANDIDULUM.**—A very beautiful form of this good old Odontoglossum, being most distinct with its milky white flowers. From Mr. Frederick Hardy, Tyntesfield, Ashton-on-Mersey.

Botanical certificates were awarded to *Maxillaria ochroleuca*, a very pretty species with narrow sepals and petals creamy white in colour, with a deep golden lip, and to *Dendrobium hursigerum* album, a white form with small flowers densely packed in the short spikes. Both of these were shown by Messrs. Sander & Co. *Dendrobium Wattianum*, a very pretty species of extremely slender, but erect growth, with numbers of terminal spikes of transparent white flowers some 3 inches in width, with a golden blotch on the lip which is deeply serrated (worth an award of merit), and *Dendrobium dicuphum*, a very beautiful Orchid, and one that is quite a miniature of *D. Phalaenopsis Schroderianum*, having all its features and growth, the flowers being about 1 inch across, pure white, with deep purple veins in the throat, were also given botanical certificates. Both came from Sir Trevor Lawrence. *Cypripedium Boissierianum*, one of the *Selenipedium* group, with pale greenish-yellow flowers, more singular than beautiful, was also given a botanical certificate. From Mr. Thomas Statter.

Other Orchid exhibits were numerous, although not of an extensive character. Mr. F. Hardy had a good variety of *Odontoglossum crispum*, with a long spike of light-coloured flowers; also cut blooms of *Lælia Cattleya Pallas superba*, one of the finest of the recent Veitchian hybrids, clearly showing its relationship to both *Lælia crispa* and *Cattleya Dowiana*. Also from the same source came a hybrid *Cypripedium* (*C. Boxalli* × *C. villosum*) of intermediate character, but darker; *Cattleya Percivaliana*, of which an extra fine variety was shown, with broad petals and a dark crimson-purple blotch on the lip (a fine form); *Cypripedium Swinburnei magnificum*, a recently certificated hybrid, better in this instance than when the award was made; and *Cypripedium Bellina*, another hybrid, but not sufficiently distinct. Mr. Ingram, Elstead, Godalming, showed *Cattleya Percivaliana* (?) alba, which bore more resemblance to *C. Trianae* in the formation of the lip; nevertheless, a beautiful variety. From Mr. Cobb came *Cypripedium Boxalli* (Cobb's var.), and one with much darker colouring, with lustrous, almost black markings, notably in the dorsal sepal. Sir Trevor Lawrence had a small, but choice selection, chief amongst which were several hybrid Dendrobates, the result of crossing *D. Ainsworthii* and *D. Fendlyanum*, in all of which the colouring was much softened through the influence of the latter. These comprised *D. chrysoideum*, with large flowers with a golden disc upon the labellum, further enhanced by a dark crimson centre; *D. xanthocentrum*, having more old gold colour on the lip, otherwise paler; also *D. xanthocentrum* var., with even less colour, but with broader sepals and petals, a distinctly beautiful form; *D. Hebe*, having extra large blossoms, the lip being broad, with pale golden centre and tipped with palest purple, the sepals and petals white, with similar shading at the points; and *D. pallens*, a particularly fine form, with pure white sepals and petals, very

faintly tipped with pale purple. These hybrids showed their more distinct relationship to *D. nobile*, one of the parents of *D. Ainsworthii*. *D. burfordense* (*D. Linawianum* × *D. aureum*), the flowers of which were suffused with lilac-purple, was included. The Burford Lodge var. of *D. nobile*, with dark blotches on the two lower sepals as upon the lip, was also included; also *Epidendrum polybulbon*, a small, but very interesting species to which a cultural commendation was awarded. *Laelia autumnalis alba* was represented by two fine spikes of its charming white flowers, showing the faintest flush of palest purple. *Phalanopsis Aphrodite*, *P. leucorrhoda*, with faint flush of rosy pink, and *P. Schilleriana* were present in cut spikes, and of *Masdevallia Courtauldiana*, a small, but profusely flowered example was shown, its pale lilac-purple flowers being very distinct. Mr. Lutwyche, Beckenham, staged *Cypripedium sylvetense majus*, one of the *insigne* race, but with smaller, although distinctly marked flowers, also *Cypripedium insigne montanum*.

From Lord Rothschild's collection at Tring Mr. Hill brought a marvellously fine spike of *Phalanopsis F. L. Ames*, one of the finest of hybrids, with seven expanded flowers and as many buds to open. The sepals and petals are pure white, the lip suffused with reddish purple. To this a cultural commendation was most deservedly awarded. From Mr. Forster Alcock came a plant of that singularly coloured Slipper, *Cypripedium tonsum*, a pale-coloured species with a bold, well-formed flower. Messrs. J. Veitch and Sons showed another hybrid *Cypripedium* in *C. Eson* (*C. Druryi* × *C. insigne*), the former parent having tended to deepen the colouring to the flower, the form of which partook of *C. insigne*. Mr. Ashworth, Harefield Hall, Wilmslow, Cheshire, had cut flowers of several fine forms of *Laelia anceps*, notably *L. a. Amesiana*, an extra fine form, with broad petals and distinct markings. *Zygopetalum Mackayi superbum* came from the same source, and that fine old hybrid Orchid, *Laelia exoniensis*, of which four good flowers were shown. It is not often one sees this one of the first hybrids. Messrs. Sander and Co., in addition to their certificated plants, had several others, chief amongst which were some very choice forms of *Laelia anceps*, the white varieties in particular, the best amongst which was *L. a. Sanderiana*, with the purest of white sepals and petals, the lip having a rich violet-purple blotch with dark lines in the throat, the flowers of extra substance. *L. a. Hollidayana*, another fine white form, has the lip with lighter markings and only a faint trace of purple; this is evidently a very distinct and free variety. *Pescatorea Klabochorum* was represented by one plant bearing a fine large flower. *Platyclinis pallida*, with very sweetly-scented creamy white flowers on large slender spikes, most attractive by reason of its perfume; *Cycnoches peruvianum*, a small growing species, both singular and interesting; *Odontoglossum mirandum*, with pale chocolate sepals and petals margined with greenish yellow; the distinct and fine hybrid *Cymbidium Winnianum*, bearing three spikes of considerable length, the sepals and petals of a soft light yellow or straw colour, the lip white with pale crimson spots, and *Phaio-Calanthe Arnoldia*, a bi-generic cross of distinct features, the flowers creamy white and rosy purple, were also included. *Cypripediums* were represented by very fine forms of *C. Leeanum*, as *C. L. James Hamilton*, with its large pure white dorsal sepal, quite in contrast to the darker sepals and deep bronzy lip; *C. L. virginale* is another very superior form with light coloured flowers of large size; *C. Lynchianum*, with some of the features of *C. Lathamianum*, but with more old gold suffusion in the flowers, had fine large flowers, the dorsal sepal reflexed with incurved edges. *C. nitens superbum* was also shown here (see certificated plants). *C. Calypso* (Oakwood var.) was shown well. This is a markedly superior form, with darker dorsal sepal and a fine lip; *C. miniatum*, quite intermediate between *C. Curtisii* and *C. insigne*, its parents, is very distinct in its features; *C. Ridolfianum*, another distinct hybrid, with pale greenish-yellow ground and dark bronzy-

crimson lines on sepals and petals, has the dorsal edged with white. *Odontoglossum crispum* and *O. Pescatorei* were both included. Mr. Statter had *Cypripedium nitens* in good condition, *C. Pariesianum* (*C. Boxalli atratum* × *C. Argus*), the petals retaining the fine distinct spotting of *C. Argus*, the lip bronzy-green, and the dorsal sepal very dark maroon, with light green edges; *C. Euphrosyne*, a form of *C. Lathamianum*; also *C. Leeanum aureum*, with much more of the golden colour apparent in the flower, a fine variety. This was the result of crossing *C. Spicerianum* with a yellow *C. insigne*. From Mr. Prewett, Swiss Nursery, Hammersmith, came a very healthy plant of the at present extremely rare *Cymbidium Traceyanum*. The plant in question bore one good spike with fine blooms, not so large or so vigorous as Baron Schroder's example shown late in 1894, but identical with it. This is the second plant that has flowered with Mr. Prewett, being part of a purchase that was presumably *C. Lowianum*, the growth being but slightly different therefrom. *Cymbidium Traceyanum* does not, it is stated, come from the same locality as *C. Lowianum*; hence it is possible some more of the former may yet be forthcoming. A grand spike of *Phalanopsis Aphrodite* from an unknown contributor was shown with fourteen large blooms.

#### Floral Committee.

There were not many exhibits before this committee.

A first-class certificate went to each of the following:—

**LACHENALIA QUADRICOLOR MACULATA.**—Flower-spikes of this very charming *Lachenalia* came from Mr. F. W. Moore, of the Glasnevin Botanic Gardens. It is a robust and handsome variety, the flowers produced freely on the scape and individually rich in colour. The extreme base is orange, varying to a reddish tone, the sepals deep green, also the petals, which have an apex of deep purple-crimson. *L. quadricolor*, the type, is a well-known species, synonymous with *L. tricolor*. It is a pity that *Lachenalias* are not more grown. There are many good kinds for colour in cultivation.

**RHODODENDRON PONTICUM FOLIOS-PURPUREIS.**—This is a very handsome shrub, similar to the type in growth, but the foliage is almost of a deep crimson-brown shade, very rich, decided and welcome. With the winter sun shining upon it such a shrub would create a rich colour picture in the garden. There is no doubt about its distinctness and the beauty of its colouring. From Messrs. Wm. Paul and Son, Waltham Cross, Herts.

An award of merit went to each of the following:—

**CHINESE PRIMULA GIANT ROSEY QUEEN.**—This was one of the many beautiful varieties in the collection of Primulas shown by Messrs. Sutton and Sons, of Reading. The present variety is very handsome, the individual flowers large, waxy and delicate rose, with greenish-yellow eye, the plant being free both in growth and bloom, with a well-built-up truss, whilst the leafage is distinctly Fern-like.

**PERSIAN CYCLAMENS.**—An award of merit was also given to Messrs. Sutton & Sons for their fine strain of Cyclamens, comprising a variety of colours. Purple Queen has, as its name suggests, purplish flowers, but we do not care for this so much as one named Salmon Queen, to which we think the award more directly applied. This is a sturdy, free-blooming plant, with neat, well-formed flowers of a carmine or salmon-rose shade, very clear and distinct.

**CHRYSANthemum JEANETTE SHEAHAM.**—This was given this award as a late decorative variety. It is very free, the flowers of the Japanese character, but of a yellow colour, deepening in the centre. It will doubtless be useful as a Japanese flowering kind, but is not particularly uncommon in other ways. Exhibited by Mr. D. Sheaham, Hartfield Road Nursery, Wimbledon.

**ROSE MRS. PIERPONT MORGAN.**—This is an American variety, the flowers exhibited having

been sent from America, this accounting for their damaged petals. It is described as a sport from Mme. Cusin, and has much the aspect of that beautiful Rose, the petals forming a bloom of charming expression, whilst the colour is deep rose. When, however, the blooms are fresh, the tint may be clearer and more, so to say, glistening. A great feature is its fragrance, even in the blooms shown, this being as delightful as in any Tea Rose we know, a precious trait not always considered by raisers of new kinds. Shown by Mr. John N. May, Summit, New Jersey, U.S.A.

**CHRYSANthemum L. CANNING.**—This was shown under the name of Heine's White or similar title, but the above is the correct designation. A lovely plant full of bloom was shown by Mr. Thomas, of the Royal Gardens, Frogmore. It is a Japanese variety, the flowers full, very freely produced and white, touched with rose.

There were very few miscellaneous exhibits. The only medal given was a silver one, which went to the large and interesting display of the various types of Chinese Primulas from Messrs. Sutton and Sons. The double varieties were extremely beautiful, the plants well grown and the flowers of refined colours. *Alba magnifica* is white, touched with rose, and the double *Heliotrope*, a soft heliotrope colour, less pronounced, but quite as pleasing as the double blue, which is a lovely shade, not slaty or purple, but clear and welcome. *Double Carnation Flake*, the flowers white, flaked with light purple, a very free-blooming variety, and such single kinds as *Pearl*, white, with yellow eye; *Giant Pink*, a large handsome flower, white, with suffusion of pink; *Grenadier*, brick-red, a bright telling colour, were also good. Messrs. H. Cannell and Sons, Swanley, Kent, showed a few of their fine single Chinese Primulas, as *Neatness*, a delicate rose and white flower; *Duchess of Fife*, soft rose; *Kentish Purple*, deep crimson-purple, the beautiful *Eynsford White*, Cannell's Pink, a distinct and attractive flower of this colour, and *Swanley Yellow*, a near approach to a true yellow variety, the flower of this colour save for a rather broad creamy white margin. Messrs. Cannell also had a bunch of that fine *Canna Queen Charlotte*, very good for this season. Messrs. J. Laing and Sons, Forest Hill, S.E., exhibited a basketful of *Nicotiana affinis variegata*. The leaves are abundant, glaucous, margined with creamy white. *Carnation Jane Collins*, shown by Messrs. Collins Bros. and Gabriel, Waterloo Road, S.E., appears the same as *Will Threlfall*. It is, we believe, supposed to be a cross with a tree variety and one of the Malmaison types, but there was nothing to indicate such relationship. The flower is of fair size, clear yellow, and scentless, the plant strong in growth. Mr. Moore sent from Glasnevin *Dematobotrys Saundersi*, an interesting plant with an umbel of tubular reddish flowers, and *Hippeastrum alicium grandiflorum*, which has far larger flowers than the type. Mr. H. Howell, Queen's Nursery, Hammersmith, had *Pteris tremula* Howelli, a very graceful Fern with dense pinnae.

#### Fruit Committee.

A large number of members was present at this the first meeting of the year. Messrs. Cheal and Sons, Crawley, Sussex, staged seventy dishes of Apples and about ten of Pears. The Apples were firm, well coloured, and not extra large. There were some very nice examples of *Frogmore Prolific*, *Lord Derby*, *Sandringham*, and *Mère de Menage* in baskets, with good single dishes of *Blenheim Orange*, *Schoolmaster*, *Cellini*, *Lord Burghley*, *Hollandbury*, and *Bismarek*, which appears to have done well in most places, a wet season suiting it. The *Crown Apple*, *Annie Elizabeth*, and *Prince Albert* were the best cooking varieties. Among the dessert kinds, *Claygate Pearmain*, *Cox's Orange*, several varieties of the *Russets*, *Ribston Pippin*, the new *Atalanta*, and *Swedish Reinette* were the best. The best Pears were *Chas. Cogne*, a large nice-looking fruit and very late, *Duchesse de Nemours*, *Catillac*, *Verulam*, and *Uvedale's St. Germain* (silver Knightian medal). Messrs. Laing and Sons,

Forest Hill, staged a smaller collection nicely arranged with Ferns in pots, the best fruits being Bismarck, Brabant Bellefleur, Tower of Glamis, Gloria Mundi, Lord Derby, Striped Beaufin, Sandringham, Flower of Kent, Lady Henniker, and Royal Russet (silver Banksian medal). A very nice dish of Tomatoes was sent by Mr. J. Gray, Bodorgan Gardens, Anglesey, N. Wales. It is a bright looking fruit, a cross between Prelude and Ham Green, and of good flavour. The committee would like to see it in March. Some very good Rhubarb named Tottenham Early came from Mr. W. Gradwill, Manor Road, Tottenham. This is a promising variety, bright pink with the colour running through the stalks, which are of a nice size. The committee thought it a good variety, and wished it to be sent to Chiswick for trial.

**Royal Botanic Society.**—At a meeting of this society on Saturday last, a motion by Mr. Rubinstein as to the admission of the public to the Gardens on payment was discussed. The motion on being put to the vote was lost by a large majority.

**United Horticultural Benefit and Provident Society.**—The quarterly meeting of this society was held at the Caledonian Hotel on Monday evening last. Mr. Joseph Wheeler presided. Twelve new members were elected and four others nominated. Two deaths have occurred during the quarter, one being that of Mr. Charles Collins, who died suddenly on December 26 at Forest Gate Railway Station. The widow being left in distressed circumstances and in very delicate health, the committee granted her £10 from the Benevolent Fund in addition to the small amount standing to her late husband's credit. The other member who died was Mr. Arthur Loeke, of Woking, after seventeen weeks on the sick fund. The amount standing to his credit was paid to the widow according to rule. The proposed increase of sick pay was discussed and a requisition signed by members present for a special meeting to be called in March for alteration of rule bearing on the point. The treasurer was instructed to invest £400 in West Bromwich Three per Cent. Stock.

NOTES OF THE WEEK.

**Anchusa Barrelieri variegata** will, I think, prove to be one of the best plants of this year, very free growing, in fact the new leaves are already well developed; they are ample in size, broadly margined with creamy white, the flowers of the most intense blue. From its habit of commencing to grow in the autumn, it has, as it were, two distinct seasons, which together form a long one. — T. SMITH.

**Cattleya exoniensis.**—A good many Orchid growers of the present day may not possibly remember when this extremely beautiful hybrid was first brought before the public. It is even now far from plentiful, and I note that its raisers, the Messrs. J. Veitch and Sons, although they catalogue, do not place a price against it. This is sufficient indication that there is not a large stock. It was shown in a cut state at the last R.H.S. meeting, also at a late meeting in the past year. I recollect a large plant of it being sold some twenty years or so back; this was afterwards broken up for stock, with what after results I do not know. In its labellum one can clearly see its affinity to *Laelia crispa*, the impress being left in the beautifully crisped edges — H. A.

**Hybrid Dendrobis.**—Anyone who was interested in these Orchids could not, I think, fail to note the very charming hybrids shown at the Drill Hall on Tuesday last by Sir Trevor Lawrence. I refer more particularly to those which have as their parents *D. Findleyanum* and *D. Ainsworthi*, the latter itself also a hybrid. There were several of these shown which were quite distinct, but in all the refinement and soft colouring of *D. Findleyanum* was most noticeable. The growth was also

more sturdy in the way of *D. nobile*, but of paler colour. This cross has beyond doubt proved to be a most satisfactory one; hence it is worth noting that *D. Findleyanum* should in the future be used in conjunction with other hybrids or species. The hybrids above noted are of very free growth. — H. A.

**Phalænopsis F. L. Ames** (hybrid).—With such a wealth of hybrid *Cypripediums*, *Lælias*, and *Cattleyas*, it is quite a pleasing change to note this hybrid *Moth Orchid*. The spike (a cut one) in question was an exceedingly fine one with fourteen flowers and buds, about half of which were expanded, the largest of these being quite 3 inches in diameter. The sepals and petals are pure white and more pointed than in *Phalænopsis Aphrodite* or *P. grandiflora*, from both of which it also differs in the colouring of the labellum, wherein reddish purple prevails. This fine spike came from the Tring Park collection, where for many years these Orchids have been grown most luxuriantly under the charge of Mr. Hill. It is named after the late Hon. F. L. Ames, who had a superb collection at North Easton, Massachusetts, U.S.A.—H. A.

**Olearia Haasti.**—"G. H. A." is quite right in supposing this to be a good seaside plant. For many years I gardened under difficulties in the storm-vexed Isle of Thanet. My cottage stood some 40 yards back from the sea, over which the wind came howling straight from the North Pole heavily laden with brine, which used to burn up even the Japanese *Enonymus*. The plants that best bore the attacks of this fierce enemy were *Olearia Haasti*, *Rosa rugosa* and *Escallonia macrantha*. Double *Gorse* stood well. The only tree that held its own was the evergreen Oak, which thrived splendidly. The possibilities in the way of trees and shrubs were few, but what compensation in the brilliancy of the flowers! Bloom and colour were splendid, and, above all, the *Carnations* stood out in peerless beauty.—M.

**Campanula Raineri.**—Surely many of your readers will agree with me in thinking that what has been a useful discussion in the way of clearing up some doubtful points of nomenclature is degenerating into personalities. If we are to have a discussion on the practice of uprooting wild plants for trade purposes, by all means let us have it kept clear from the strictly limited question at issue. We have already had a considerable amount of information regarding *C. Raineri* and the plant which passes in some gardens as such, and if no one has any more to tell us about it, another season may help to clear up any doubtful points which may remain. I do not want to introduce any names of trade dealers, but in justice to those abroad I should like to say that with me the losses among carefully packed plants from foreign nurseries do not exceed those among similar plants from English nurseries.—S. ARNOTT, *Carsethorn, Kirkcubbin*.

**Verbascum phœniceum.**—Mr. Archer-Hind in your last number speaks of this Mullein as never having ripened seed in his garden for more than fifty years and of his never having met with a white variety of it. Here, in my garden, it is, after *Chaixi* and *philomoides*, the most prolific of seedling Mulleins, numbers of self-sown plants coming up yearly in my borders, and amongst these, which vary very much in colour, are occasionally pure white forms. These latter, I notice, have only been produced on the stoniest parts of a rockery. With me *V. phœniceum* has never crossed with other species, although it has been in flower contiguous to other Mulleins over and over again. — F. M. BERTON, *Highfield, Gainsborough*.

— In all probability before this reaches you someone will have sent you a note regarding the remarks of Mr. Archer-Hind in THE GARDEN of January 12 (p. 31), but a few words may still be acceptable. On reading Mr. Archer-Hind's note, I referred to the illustration of *V. phœniceum* on p. 519, and for its size it is a faithful representation of that species, and not of *V. nigrum album*. Your correspondent, "J. E. N." is correct enough in speaking of a

white variety of *V. phœniceum*. I have had this in my garden for several years, my first plants having been raised from seed purchased as *V. phœniceum hybridum*. The seedlings varied considerably in colour, some pinkish coloured and the white ones being particularly pleasing. In form and habit they show no trace of hybrid origin, and only appear to be seminal varieties. These plants ripen seed here every year, and sow themselves so freely as to become rather troublesome in the garden. From the exposed position of my garden I find it difficult to stake this *Verbascum* in such a way that the sticks are hidden, so that its appearance is much spoiled. On the other hand, *V. nigrum album* stands up well with very little assistance in the way of staking.—S. ARNOTT, *Carsethorn by Dumfries, N.B.*

**Sweet Peas.**—I have very much pleasure in confirming what Mr. Burrell writes regarding the newer varieties of Sweet Peas. In addition to those mentioned by him I would strongly advise those who have the opportunity to try the following varieties: *Her Majesty*, a rich, rosy-pink variety, strong and robust in growth, one of the best for cutting; *Dorothy Tennant*, a beautiful shade of lilac-mauve; *Firefly*, the best of all scarlets; *Emily Henderson*, the well-known white of American origin; *Bronze King*, coppery bronze, with white wings; and *Blushing Beauty*, distinct, a soft pink shade. *Lady Penance*, a beautiful rose colour, and *Lady Beaconsfield*, a combination of yellow and rose, are two very recent introductions which are particularly charming. I made these notes last year after trying about thirty sorts. In Scotland it is my experience that Sweet Peas, if sown during January in pots, can be had in bloom quite a month earlier than those sown outside in the usual way. At planting-out time it is necessary to give the young plants slight protection until they become inured to the exposure.—W. M. CUTBERTSON, *Springfield, Rothsay*.

**Dendrobium Phalænopsis Schröderianum.**—The more we see of this most beautiful Dendrobe the more are we charmed with it. The great diversity of colours is one of its peculiar charms; these are exceedingly various, it being a difficult matter to know which to admire most, those with the deep richly coloured tints of purple and purplish rose or the delicately beautiful lighter tints wherein the ground colour of pure white is so softly suffused with rose or purple; there are also those with quite intermediate tints. It is most satisfactory to find that this *Dendrobium* is such a very free-growing plant, enjoying an abundance of moisture and heat, it is true, when growing. I recently noted at Messrs. Sander's establishment an immense importation, many of which had bulbs of unusual length, whilst nearly every one was crowned with three or four remnants of flower-spikes, sufficient indication of its free flowering. Not even the good old *Dendrobium nobile* can hope to hold its own against this formidable rival, which is already fully entitled to the topmost place. The flowers last for a long time in the best possible condition, whilst the spikes, by reason of their length, further extend the season. I find that a drier atmosphere and a slightly cooler temperature suit this Dendrobe when in flower. When in growth my plan is to suspend the plants from the roof. I note also that teak baskets seem to suit better than shallow pans. Abundance of water can be more safely given to basket plants than to those in pots. — ORCHIDS.

**The weather in West Herts.**—The recent cold spell lasted from December 30 to January 13, or for fifteen days. During this period the greatest cold experienced during the daytime occurred on the 11th inst., when the thermometer in the screen, 4 feet above grass, at no time rose above 26°. During the two previous nights a thermometer exposed on the surface of the snow registered 18 of frost. Both of these readings are the lowest recorded as yet this winter. Although the last three days have been comparatively mild, the ground both at 1 foot and 2 feet deep is at the

present time as cold as at any time during the frost. At 2 feet deep the temperature is now 4°, and at 1 foot deep 2° above the freezing-point. The latter reading is 2° colder than the January average for the previous nine years. On Saturday night the heaviest fall of snow of the present winter took place, the average depth on the ground on Sunday morning being 3½ inches. By Monday a great deal had melted, so that the ground was not even completely covered. During the past week sunshine was recorded on but one day (Sunday), and even then the sun shone out for only about an hour.—E. M., *Berkhamsted*.

#### Proposed national vegetable exhibition.

The report of the provisional committee was presented at a meeting of the general committee, Mr. Briscoe Ironside in the chair, at the Royal Aquarium on the 15th inst., about thirty members being present. The committee stated they had failed to obtain the consent of the Crystal Palace directors to hold the show there in September, and they had approached the Royal Aquarium directors with that object. The latter agreed to assist and grant space for a show the second week in September. Several leading firms had promised liberal sums to the prize list. Messrs. Sutton declined on the ground that their promise of help was conditional on the show being held at the Palace, and others wished for more information. The secretary *pro tem.*, Mr. A. Dean, stated that about £200 would be required to meet the expenses of such an exhibition, and of this about £40 was promised. Mr. A. Dean stated he must resign the office of secretary, as he found he could not give the time to the work, and he only accepted it at first with the intention of giving the movement a start. Mr. Richard Dean was then proposed, but was obliged to decline the office. Mr. Molyneux was finally selected, but when the duties had been defined, Mr. Harrison, Leicester, thought it would not do to have a secretary so far away from the work, and he thought it best to give up the exhibition this year and have a larger next. Mr. Millard, representing Messrs. Sharpe, Lincoln, suggested an adjournment for a month. Mr. Cannell, Swanley, seconded. It was considered that by that time the committee would be in a position to know how the various seed firms had replied to the circulars sent them.

#### GARDEN SCREENS.

SCREENS in London gardens are somewhat desirable, and especially so when the backs of one line of villa residences abut upon those of another, and where that is so anything like privacy is practically impossible. But it is possible to provide screens, and that, too, at no great cost. A wooden lattice fence can be put up with diamond shaped openings, and if the light framework does not touch the ground, and so contract rot from the wet soil, and it be painted with one or two coats of green paint, it will last for a considerable time, or a framework can be made by fixing two uprights, one at each end of the proposed line of screen, and then stretching a few lengths of galvanised wire between the two uprights. Other designs will no doubt suggest themselves.

Now comes the question what to plant against such a screen. Last year I saw one constructed with galvanised wire that had been planted alternately with the common Virginian Creeper and the blue Clematis Jackmani. When well established the shoots of the Clematis, with a little training, ran through those of the Virginian Creeper and made an excellent summer screen. Both subjects being deciduous, there was, of course, an absence of foliage during the winter, but there were many leafless shoots notwithstanding, and then the screen was not so much required in winter as in summer. The *Colchic Laurel* or *Aucuba japonica* will make a good evergreen covering, the shoots being loosely tied in and displayed so as to cover as much space as possible; or a vigorous growing common Ivy may be used, only that large plants in pots would be necessary to ensure a rapid covering, as young plants of Ivy are of somewhat slow growth until they get

well established. The fact that I am dealing with suburban villa gardens in London somewhat narrows the area of selection, as one has to consider what is likely to succeed in somewhat crowded districts. R. D.

#### REGISTERING FROST.

IN order to get the correct register of frost at night, should the thermometer be exposed or shaded in any way? I am in the habit of hanging mine horizontally about 3 feet above the surface of the ground without any covering whatever. Is this right?—G. J.

\* \* On a clear calm night the greater the amount of sky from which the bulb of a minimum thermometer is shielded and the greater the distance the instrument is from the ground the higher will the reading be. The nature of the surface over which the thermometer is suspended will also influence it. Therefore, meteorologists, in order to obtain comparable results, place their thermometers in a thermometer screen which, while admitting the air freely, shuts off entirely direct radiation both from the sky and ground. Moreover, the screen is always placed on an open lawn and the thermometers suspended 4 feet above the Grass. This plan does not of course give the degree of cold to which vegetation is subjected on a frosty night, but is the only way to obtain what "G. J." asks for—the correct register of frost. They also place an unmounted thermometer on the surface of an open piece of lawn, with the Grass kept at all seasons quite short. These are the readings I prefer quoting when writing for gardeners, but they are not as strictly comparable as those taken in the screen. But for all practical purposes, "G. J.'s" method would be almost equally satisfactory for comparing the lowest night temperatures between one place and another if all gardeners would agree to adopt precisely the same plan, and be careful to set their thermometers right when they found any spirit had evaporated into the upper part of the tube.—E. M., *Berkhamsted*.

**Granite dust for the garden.**—I notice that certain advertisers are recommending the use of granite dust for garden use. Will any of your readers tell me if they have any experience of it in this way?—J. E. I.

\* \* In making the rock garden at Chiswick some years ago we used this largely for mixing with the soil in which the various alpine plants were put. It seemed to suit them remarkably well, as they all did well in it, keeping as it did the soil porous, and admitting of plenty of water being given during a dry season. It also, when sprinkled over gravel that does not bind well, tends to solidify it.—Ed.

**Competition in garden design.**—The worst feature of nearly all our public parks and gardens is their winding belts of trees and shrubs. The competitive system of offering a substantial premium for the most picturesque plan wherever a new place has to be laid out and planted is a serious hindrance to reform. All sorts of pretty plans may be drawn on paper, but what is tolerable on an ordinary plan becomes impracticable when the ground comes to be dealt with. The proper place to design the ornamental features of park or garden is upon the ground itself, and there alone should they be determined with all the factors that influence the work before the eye. If there must be a plan for the guidance of those to whom the details of the work are entrusted—and this much is often necessary—it is easily prepared from the actual thing as arranged upon the ground itself. This conventional preparation of the garden on paper is beginning at the wrong end. The designer is so apt to be influenced by the things he thinks pretty as to apply them indiscriminately, and they become virtual trademarks which indicate plainly who was the author of the work. Next to simplicity as regards the arrangement of walks and roads the all-important point for consideration is the permanent growth of the trees and shrubs that are to adorn the

place. On the plan we see trees like beehives and sugar-cones, but the less there is of such ugly forms in gardens the better. The great fault, however, is that all go in for the same style of shrubbery, which begins by planting a medley of many things for immediate effect and ends in a confused tangle, in which the gross and common overpower the choice and pretty, or the pruning knife is brought to the rescue to perpetuate the beehives and cones.—A. H.

#### OBITUARY.

##### WILLIAM THOMSON.

WILLIAM THOMSON, of Clovenfords, whose death on Saturday, January 12, at the age of eighty-one I regret to announce, was, I believe, a native of Roxburgh, but settled early in life with his father in Mull. Afterwards he went to Bothwell Castle, then a noted place under the management of a well-known gardener, Mr. Turnbull. Mr. Marnock and Mr. Thomson were, I believe, at Bothwell together. From there Mr. Thomson went to Wrotham Park, Middlesex, where he grew fine fruit and carried out numerous improvements. From Wrotham he went to Dalkeith Palace, where he remained about sixteen years, when he left to manage the famous Clovenfords Vineyard, which he had founded and built. Mr. Thomson was a man of rare natural ability and force of character, kindly in all his personal relations, and a thoroughly practical and enthusiastic gardener. He was a very frequent contributor to the gardening press at one time, and his vigorous articles on heating by hot water in the *Scottish Gardener* about 1860 did much to awaken attention to the subject and improve the system of heating hothouses and other buildings. He was the inventor of the treble retort boiler, one of the best boilers for burning coal yet tried. He was, indeed, a competent hot-water engineer, and he taught some of the young men, whom he turned out, to be as competent as himself in that line. Thomson's book on the Vine has gone through several editions. He was a well-known figure at all horticultural exhibitions and meetings in Scotland up to the last, and will be greatly missed. He trained and sent out from Dalkeith and Clovenfords many young men as head gardeners to important places in different parts of the kingdom, and was presented with a handsome testimonial by a number of his earliest pupils some few years back. W.

**Mr. J. Simpson.**—The Société Nationale d'Acclimatation de France has, we understand, conferred its medal of the first class (Medaille de Première Classe) upon Mr. J. Simpson, Wortley Hall Gardens, for his book entitled "The Wild Rabbit in a New Aspect," published not long since by Messrs. Blackwood and Sons, Edinburgh.

**The late Mr. Chas. Collins.**—A meeting of horticultural pressmen was held recently at the Horticultural Club, Hotel Windsor, to take steps to raise a fund for the widow and children of the late Mr. Chas. Collins, whose sudden death was recorded in THE GARDEN. Subscriptions may be sent to any of the horticultural papers.

**Gardeners' Royal Benevolent Institution.**—The following are the names of the successful candidates, with the number of votes for each, at the election held on Thursday, January 17: James Clarren, 2824; Thomas Thomas, 2735; Emma A. Ivery, 2500; Henry Fielder, 2261; Clara E. Brown, 2188; Robert Pettitt, 2024.

**Names of plants.**—John Bennett.—Orchids correctly named, but not the best forms.

*The Wild Garden: or, the Naturalization and Natural Grouping of British Exotic Plants, with a chapter on the Garden of British Wild Flowers. Fourth edition, with wood engravings from drawings by Alfred Parsons revised and enlarged. Pemy 2vo, linen cloth. Price 12s.; well bound in half morocco, 18s. Through all booksellers.*

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"This is an Art  
Which does mend Nature: change it rather; but  
THE ART ITSELF IS NATURE."—Shakespeare.

## ORCHIDS.

## PHALÆNOPSIS IN WINTER.

THE blooms of the Moth Orchid are always pleasing, more especially at the present time, when flowers are exceedingly scarce. These plants do not receive so much attention as they deserve, no doubt in consequence of the large amount of heat and moisture required to grow them to perfection. Occasionally one may notice a few kinds of Phalænopsis doing well under quite cool treatment, but I question if they continue in good health for many years. From personal experience I have known these plants thrive admirably during the summer months when given comparatively cool treatment, but in the winter the lower temperature and dryness of the atmosphere generally do much damage to the beautiful leaves and roots, and when so affected the plants take a long time to recover. Phalænopsis succeed best when grown in a house set apart for their cultivation, as in a state of Nature they grow where the atmosphere is nearly always saturated with moisture, and consequently they require similar conditions as far as possible in our houses. These plants mostly commence to make fresh growths in the early spring and continue growing until the autumn, when the resting period begins. During this season, however, they must be kept nice and moist, the Sphagnum being constantly kept in a fresh growing state. Care should be taken not to pour the water directly upon the leaves, only applying it to the Moss, and when fully open the flowers should not be sprinkled with water from the syringe, for this causes them to become spotted and soon decay. During the present season the thermometer should not fall much lower than about 70° in the daytime and 5° less in the night, but when the plants commence growing in March or April the temperature should gradually rise to between 75° and 80°, and during the night never fall below 70°. Much benefit may be derived by occasionally sprinkling upon the floor whilst the plants are in growth some soot and salt and also a little manure at intervals. Phalænopsis succeed well in either baskets, cylinders, or upon blocks, and require no other materials around their roots than good living Sphagnum Moss. These should be suspended from the roof or placed in a light position, and during the summer the plants must be protected from the sun's rays. One of the most beautiful kinds now in bloom is

*P. Schilleriana*, a charming species even when not in bloom, for its lovely variegated foliage contrasts well with the bright shining leaves of other sorts. This plant has been known to European gardens since 1860, having been introduced from the Philippine Islands the year previously. The leaves are large, deep green, and mottled with silvery grey, and it produces a long branching peduncle of many flowers. These individually are 3 inches and sometimes more in diameter, white, suffused with delicate rosy purple, and spotted minutely with red at the base of the lip. Amongst others in bloom at the present time is

*P. Aphrodite*, or, as it is better known in our gardens, *P. amabilis*, a grand variety, with deep green foliage above and purplish beneath. This also has fine large flowers, pure white, the side

lobes beautifully pencilled with purple and stained with yellow in the throat.

*P. Leucorrhoda* is also a beautiful kind and a supposed natural hybrid between the two previously mentioned species. Sometimes the foliage is quite green, and often slightly marbled as in *P. Schilleriana*; the sepals and petals are white, more or less suffused with rose, and the lip is intermediate in shape between those of the two supposed parents.

*P. Intermedia Portei*, also noticed in flower, is a rare and beautiful variety of the typical form. It has medium-sized, bright green leaves and flowers of exquisite form and colour; the sepals and petals are white, flushed with purple at the base; whilst the front lobe of the lip is a deep violet-purple, the side lobes light yellow, dotted with red.

*P. F. L. Ames* is also a very rare and distinct kind, being one of a few garden hybrids in this genus. It was raised by Mr. Seden in Messrs. Veitch's nursery between *P. amabilis* and *P. intermedia*. In this kind the sepals and petals are narrower, white, shaded with rose; the front lobe reddish purple with a yellow disc.

These by themselves make a very beautiful display during the dull months of winter, and well repay for any little extra attention bestowed upon them. WM. HUGH GOWER.

**Watering Calanthes.**—It is surprising what a small quantity of water the Veitchi and vestita varieties of *Calanthe* require while developing their flower spikes. Since the middle of November my plants have been watered only once. Many of the pseudo-bulbs are carrying spikes from 3 feet to 4 feet long—a proof that the treatment they receive is satisfactory. It may not be generally known that an excess of moisture at the root changes the colour of the flowers from that rich rose so pleasing to quite a pale pink. When these *Calanthes* are grown in a compost light in texture they may require, perhaps, more water, but I do not think soil of this character is the right kind for this useful winter-flowering Orchid. I employ a compost almost entirely composed of strong loam in a half-decayed condition, with sufficient charcoal to keep it porous and cow manure to sustain the growth.—E. M.

**Cymbidium Traceyanum.**—It is about four years since this beautiful plant first appeared with Mr. Tracey, of Twickenham, amongst an importation of *C. Lowianum*. I recently noticed in the collection of Mr. J. Prewett, of Hammersmith, a nice piece carrying a spike of several flowers. I suppose this has also been imported with a consignment of *C. Lowianum*, from which it is not distinguishable when not in bloom. It is closely allied to *C. giganteum* and *C. grandiflorum*, and it is to be hoped that some of our collectors may be fortunate enough to come across it in flower in its native country and send it home in quantity, for it is certainly a grand addition to this fine family of Orchids.—G.

**Lælia harpophylla.**—This is a handsome Orchid when well grown, and one which, on account of the bright and lively colour of its flowers, should be represented in all collections. It is somewhat early for this species to be in bloom, but I have noticed that several Orchids are flowering earlier than usual this season, perhaps owing to the very mild autumn and early winter. The flowers are produced from the top of the stem-like pseudo-bulbs in racemes of five or six. Each flower measures 3 inches across and is bright orange-red, with the exception of a whitish margin to the lip. This species is easily grown and very free-flowering; it is, moreover, a very accommodating plant as to temperature. It will thrive with the *Odontoglossums*, but the best position is in the intermediate or Cattleya house. Newly-imported plants certainly grow away with greater freedom in this warmer temperature. These when received should be carefully cleaned and suspended head downwards from the roof. When the pseudo-bulbs plump up and show signs of breaking into growth the plants should be placed in pots nearly

filled with clean crocks. A small stake must be placed in the centre of each, and one of the strongest pseudo-bulbs tied firmly to this; the others should be looped up neatly, using matting twisted up tightly. The plants will then look much tidier than if left loose, and as they cannot rock will also thrive better. A very thin surfacing of compost will suffice for the first year, and water must be sparingly applied until the roots have obtained a good hold of this. The syringe must, however, be freely plied between the pots, and on bright mornings in summer the plants may be lightly dewed overhead with tepid water. When the growth is complete the plants may with advantage be removed to a light sunny position in a cooler house and kept rather drier at the roots until the flower-sheaths begin to show, when they may be returned to the Cattleya house.—H. R.

## PROPAGATING ORCHIDS.

ORCHIDS of many popular and beautiful kinds are now so cheap and easily obtained that, from an economic point of view, artificial propagation of these is not worth the trouble involved. Still, sometimes one has a variety that it is desirable to propagate, and in such cases, slow though the process may be, the time and trouble will be well spent in the endeavour to increase the stock. Amateurs and others unacquainted with the culture of Orchids ought to gain some experience in growing them before attempting their propagation. The reason of this is obvious. Many plants that to the casual observer seem healthy and strong may, to a practical eye, be found wanting in some particular. The roots may not have a firm hold of their adopted home in pot or basket, or the leading growths or pseudo-bulbs may not be so robust as those preceding them. A careful cultivator will note these and other signs before commencing any operation that may possibly have a further weakening effect upon the plants. Given strong healthy plants, however, and skilful treatment, these experiments are very interesting. Some Orchids are quite easily propagated, as, for instance, the group of *Dendrobies* with long stem-like or terete pseudo-bulbs, as *D. mobile* or *D. Pierardi*. These frequently produce young plants upon the end of the pseudo-bulbs, or they may be induced to do so by cutting these off after flowering and laying them in boxes or pans of Sphagnum Moss kept constantly moist. If this is done in spring nice little plants are produced by autumn, and half-a-dozen of these placed in a 6-inch pot will soon make shapely specimens. Strong pseudo-bulbs of *Calanthe Veitchi* or *C. vestita* may be cut in four vertically, and with careful treatment each quarter will produce a new growth. This must not, however, be undertaken unless a brisk bottom heat is at command, on which to start the pseudo-bulbs after being placed in small pots of Moss. When new growth is well advanced and the young roots can be seen, the pieces may be pulled gently apart and potted separately, to be afterwards grown on in the usual way. *Thunias* are easily propagated by cutting the old pseudo-bulbs into lengths of about 6 inches, and inserting five or six of these around the edge of a 4½-inch pot. The best time to do this is as soon as the growths have attained their full size. A mixture of peat, chopped Sphagnum, and finely broken crocks is the best compost, and the pots should be well drained and kept regularly moist in a warm corner of the East India house. If carefully treated each cutting will break into growth at the base, and they should be left in the pots until these are full of roots. If the growth by this time is not quite finished, the plants may be carefully repotted into 6-inch pots, but if this is complete, they must be gradually

dried off and left until the following spring. Pseudo-bulbous Orchids of the Cattleya and Odontoglossum types do not in most cases lend themselves so readily to propagation. The mode usually practised is to cut through the rhizome with a view to obtaining back breaks, the lead being then removed and set growing on its own account. This plan does not, of course, allow of so rapid an increase as those described above. In the case of Cattleyas it is safer to notch a little more than half way through the rhizome at first, then when roots are emitted from the portions to be divided, cut right through, leaving them undisturbed until the pseudo-bulbs are formed, and dividing at next potting time. With some Orchids, however, this caution is unnecessary, *Lycaste Skinneri*, *Oncidium flexuosum*, *Burlingtonia decora*, and many others being easily propagated simply by dividing the plants as described and watering carefully until new roots are formed. *Cypripediums*, too, are easily increased by division of the plants. Each growth can be separately potted if desired, and will make a plant, although it is generally advisable to leave three or four together. *Vandas* and other Orchids of a similar habit frequently produce side breaks that may be taken off with a few roots attached and placed in small pots of Sphagnum and charcoal. These soon grow into neat little specimens in a suitable temperature, and no harm can accrue to the parent plants by their removal. It must not be forgotten that in all these operations a slight check is given to the plants, and this must be counteracted by extra attention until they recover. A kind of convalescent treatment is necessary, a little more heat than usual and a rather closer atmosphere being very recuperative.

H. R.

***Cypripedium Roezli*.**—I recently saw an exceedingly finely coloured variety of this old favourite. It belongs to the *Selenipedium* section and much resembles *C. longifolium*, of which species it is considered a variety by some authorities. The flowers are similar in shape to those of *C. longifolium*, having a large greenish lip and long pointed petals. In *C. Roezli*, however, they are of a much deeper colour than is ever seen in *C. longifolium*. This is almost a perpetual blooming species, with a long, erect spike which seldom has more than one flower open at a time. It was discovered about fifty years ago on the Andes of Ecuador, growing at about 4000 feet elevation, and first flowered in this country in 1874 with Messrs. Veitch and Sons, of Chelsea.—W.

#### SHORT NOTES.—ORCHIDS.

***Masdevallia Courtauldiana*.**—This was raised by Mr. Norman Cookson, of Wylam-on-Tyne, between *M. rosea* and *M. Shuttleworthii*. The scape is slender, rather longer than the leaves, and one-flowered, the flowers being of a uniform shade of light rose. It is now close on six years since this fine variety first bloomed. W.

***Cymbidium Winnianum*.**—Only two hybrids have appeared in this genus, *C. Winnianum* being one. It is certainly very distinct and a fine acquisition, being a cross between *C. giganteum* and *C. eburneum*. The plant appears to be very vigorous, and the fine ivory white blossoms, which are spotted with crimson at the base and borne on long arching spikes, last a considerable time in perfection.—W.

***Epidendrum polybulbon*.**—This is a native of Mexico, and, I believe, has also been found in the West Indies. It has been known for a considerable number of years, but was not seen in a living state in this country for a long time after its discovery. The blooms are each about an inch or more across; the sepals and petals, nearly equal in size, are yellowish green; the lip pure white, striped in the middle with yellow.—G.

***Cypripedium Mrs. F. Hardy*.**—This fine hybrid, recently shown at the Drill Hall, Westminster,

by Mr. Hardy, is the result of crossing *C. bellatulum* with *C. superbiens*. The flower is of pleasing appearance, with slightly drooping petals, and borne upon an erect stem from 9 inches to a foot in height. All the segments are pure white and heavily spotted, with the exception of the lip, which is shaded with brownish rose in front.—W.

***Dendrobium nobile elegans*.**—Under this name I have received some blooms from Mr. Cypher, the Queen's Road Nurseries, Cheltenham. In this form the flowers are of extra substance and also of fine size, measuring nearly 4 inches across the petals. The sepals and petals are broad, heavily tipped with rich rosy purple, lighter at the base; the lip is pale yellow, and has an exceedingly deep maroon blotch at the base, the tip being rosy purple.—W.

## TREES AND SHRUBS.

### NATIVE EVERGREENS.

WHEN after a very hard winter we see the evergreen trees of the garden in mourning, and perhaps many of them dead, as happens to Laurels, Laurustinuses, and often even the Bay, it is a good time to consider the hardiness and other good qualities of our British evergreens and the many forms raised from them. If we are fortunate enough to have old Yew trees near us, we do not find that a hard winter makes much difference to them, even winters that brown the evergreen Oak. We have collected within the past 200 years evergreen trees from all parts of the northern world, but it is doubtful if any of them are better than the common Yew, which when old is often picturesque, and which lives for over a thousand years. Of no other evergreen introduced to Britain can anything of the kind be said. Of this great tree we have many varieties, but none of them quite so good as the wild kind when old. In the garden little thought is given to it and it is crowded among shrubs, or in graveyards where the roots are cut by digging, so that one seldom sees it in its true character when old, which is very beautiful. The Golden Yew is a form of it, and there are other slight variegations which are interesting from a merely garden point of view. The Irish Yew is a well-known form, and its prim shape is too much seen. Other seedling variations of the common Yew are better than that kind.

After the ever-precious Yew, the best of our evergreen shrubs is the common Holly, which in no country attains the beauty it does in our own; certainly no evergreen brought over the sea is so valuable not only in its native form, often attaining 40 feet even on the hills, but in the almost innumerable varieties raised from it, many of them being the best of all variegated shrubs in their silver and gold variegation; in fruit, too, it is the most beautiful of all evergreens. Not merely as a garden tree is it precious, but as a most delightful shelter around fields for stock in paddocks and places which want shelter. A big wreath of old Holly unclipped on the cold sides of fields is the best protection, and a grove of Holly north of any place we want to shelter is the best thing we can plant; the only thing we have to fear being the rabbits, which when numerous make Holly difficult to establish by harking the newly-planted trees, and in hard winters even barking and killing many old trees. As to the garden, we may make beautiful evergreen gardens of the forms of Holly alone.

Notwithstanding the many conifers brought from other countries within the past few generations, as regards beauty, it is very doubtful if more than one or two equal our native Fir, which when old is so fine in its stem and head.

Few things in our country are more picturesque than old groups and groves of the Scotch Fir; few indeed of the conifers we treasure from other countries will ever give us anything so good as the ruddy stems and frost-proof crests of this northern and British tree.

Again, the best of evergreen climbers are our native Ivy, and the many beautiful forms allied to it or that have arisen from it. This in our woods arranges its own beautiful effects, but in gardens it might be made more delightful use of, and no other evergreen climber comes near it in value. The form most commonly used in Britain—the Irish Ivy—is by no means so graceful as some others, and there are a great number of delightful forms varying in form and even in colour. These for edging banks, screens, covering old trees, and forming summer-houses might be made far more use of. In many northern countries our Ivy will not live in the open air, and it is so happy with us, that we rarely take advantage of our privileges in such a possession in making both shelters, wreaths, and screens, and many beautiful things of it that would need little care. It requires care in trimming on our houses and on cottage roofs; but there are many pretty things to make of it away from buildings, and among them Ivy-clad and Ivy-covered wigwags, summer-houses, and covered ways, the Ivy supported on a strong open frame-work, and trained over sticks till it took hold.

The Box tree, which is a true native in certain dry hills in the south of England, is so crowded in gardens, that one seldom sees its beauty as one may on the hills full in the sun, and the branches take a charming plummy toss. To wander among natural groves of Box is a great pleasure, and there is no reason why we should not plant it in groups or colonies by itself full in the sun, so that one might enjoy the same charm of form that it shows wild on the hills. In some heavy soils in England it does not grow, but there are many of our soils that suit it perfectly. A bower of one of the handsome-leaved Ivies in a grove of Box would be charming, and its charms would last long.

Also among our native evergreens is the common Juniper, a scrubby thing in some places, but on heaths in Surrey, and favoured heaths elsewhere, often growing over 20 feet high and very picturesque, especially where mingled with Holly. There is an upright form, called the Irish Juniper, in gardens.

The Arbutus, which borders nearly all the streams in Greece, ventures into Ireland, and is abundant there in certain parts in the south. This beautiful shrub, though tender in midland counties, is very precious for the seashore and mild districts not only as an evergreen, but for the beauty of its flowers and fruit. Still, it is the one British evergreen which has to be planted with discrimination in places where the winters are severe in inland districts.

***Osmanthus ilicifolius*.**—Apart from its value as an evergreen shrub so well set forth on p. 17, this *Osmanthus* is decidedly pretty when in bloom, or rather when flowering as profusely as it did during the autumn of 1893, for the blooms are small, and consequently when produced in limited numbers they are not particularly attractive. The flowers are pure white and produced in clusters from the axils of the leaves. These clusters of blossoms extend for some distance along the shoots, so that when every twig is crowded with them they are very noticeable. Like those of a nearly allied plant, *Olea fragrans*, the blossoms of the *Osmanthus* are very pleasantly scented; indeed, in many features they bear a great resemblance to this *Olea*, but are much whiter. I never before saw the different kinds of



Osmanthus flower with anything like the freedom that they did in 1893, the result no doubt of the almost tropical summer. Last year, on the other hand, very few flowers made their appearance. Besides the forms mentioned in the above quoted article there is the variety *myrtifolius*, a plain dark green, unarmoured leaf, which undoubtedly originated as a sport from the typical kind, as it will occasionally show signs of reversion. This variety forms a neat, freely-branched little bush, not unlike a *Phillyrea*. A second form, *rotundifolius*, has rounder leaves, but the plant does not seem to grow so well as *myrtifolius*. Notwithstanding the great resemblance that some forms of this *Osmanthus* bear to a Holly, there is really no affinity between them, the genus *Osmanthus* being allied to the Olives. Such being the case, they were at one time often grafted on the Privet, and in this way were rarely satisfactory, but since the crusade has set in against useless grafting it has not been so much followed. There is really no reason why grafting should be employed for the propagation of the *Osmanthus*, as cuttings strike root readily enough. The best time to take them is at the end of the summer, when if kept in a frame they will be well rooted by the spring.—T.

EURYA LATIFOLIA VARIEGATA.

THE shrub so long known in gardens under the above name is, according to Sir Joseph Hooker, not a *Eurya* at all, its correct name being *Cleyera Fortunei*. Though cultivated in this country for upwards of thirty years, it has not flowered till recently, and its blooms were almost unknown till flowering examples of it were exhibited at the Chiswick conference on trees and shrubs held last autumn. The specimens shown were contributed by Lieut.-Colonel Tremayne, Carclew, Cornwall. This afforded the first opportunity of examining the flowers, with the result that this well known shrub has been proved to be a *Cleyera*, to which genus it was always considered to be nearly related. Of course, in the favoured western climate it is hardy, but in many districts of England it requires to be treated as a greenhouse shrub, and even then it is a very useful plant in many ways. In the matter of foliage this *Eurya* bears a certain amount of resemblance to a *Camellia*, but the leaves are longer in proportion to their length and not quite so thick in texture as those of a *Camellia*. The variegation of the *Eurya* does not consist of any regular markings, for the leaves when young present an almost indescribable blending of white, yellow, pink and green, but when mature a good deal of the pink disappears. Good examples are nearly as brightly coloured as some of the *Crotons*, and besides its ornamental foliage, the merits of this *Eurya* are still further enhanced by the fact that, being almost hardy, it may be kept in any structure from which frost is just excluded. In draughty corridors and such like places it may be employed without injury, the leathery texture of its leaves readily admitting of the removal of the dust which in such places quickly accumulates on the foliage. It is not at all a difficult plant to strike from cuttings, though at the same time it does not root so readily as many other subjects. The best cuttings are furnished by plants that have been wintered under glass, as they root more readily than the shoots taken from bushes in the open ground. The weaker side shoots should be chosen for the purpose rather than the stouter terminal ones. They should be taken when in a half-ripened condition, which will be as a rule about midsummer or thereabouts. A convenient length is about 4 inches, and if cut off to a joint and the bottom leaf removed, they may be dibbled firmly into well-drained pots of sandy soil. Then if kept in a close propagating case in a temperature rather higher than that in which they have grown, these cuttings will strike in two or three months, when they must be potted off. One caution to particularly observe is that the cuttings are not allowed to flag previous to insertion, as if this is done, many fail to recover.

It was an old, but now pretty well exploded, idea that cuttings of all kinds should be left some little time before insertion in order that the superabundant sap might drain away, and thus lessen the chances of decay; but it is now pretty well conceded that, except in the case of succulents and a few other things, the quicker the cuttings can be put in the better for their chances of success. T.

**Sciadopitys verticillata.**—My experience with the Umbrella Pine of Japan is anything but pleasant. Fifteen years since two plants were purchased, each costing a guinea; they were carefully planted in the natural soil, which was inclined to be heavy, excepting that a quantity of old garden soil was added when the garden was re-formed. No progress was made by the trees for several years, when they were removed to another part of the garden and planted wholly in peat, decayed leaves, and sand. An improvement was soon manifest in the growth and colour of the leaves, but it proved only short-lived; the plants very quickly changed to the objectionable hue they had assumed prior to removal. In spite of repeated watering when the weather was dry the plants got gradually less until they died five years since. With the exception of the first and second year after planting, the second time the plants never made any progress at all.—E. M.

**The Tulip Tree in Yorkshire.**—Referring to the note of your correspondent at p. 31, January 12, I can answer in the affirmative as regards *Liriodendron tulipiferum* succeeding, as far as growth goes, in the W. R. Yorks. About ten years since I planted a small tree at Holden Clough, and it is now a shapely tree of 12 feet to 15 feet high. Of course, I do not expect it to bloom, as in much more favoured climates than that of West Yorks it does not flower until it is a full grown, one may say aged, tree, but its foliage is so distinct and peculiar, that without bloom it is well worth growing. It is no doubt difficult to establish, but once thoroughly established it is of fairly rapid growth. Its enemy is not winter cold, but the early frosts of autumn which damage the young growths. Not so much, however, as in the case of the other tree mentioned by your correspondent, *Catalpa syriacifolia*; this can do no good, that is, cannot flower, from the above cause—want of ripening of the wood in autumn. I have had seedling plants of *Paulownia imperialis* a yard high which have been in their sappy condition killed off, like *Asparagus* shoots, by the early frosts. Neither very early nor very late growths answer in the W. Yorks climate, where, by the way, *Polygala Chamæbuxus*, from Geneva, has been flowering for the first time during the recent severe weather.—R. MILNE-REDHEAD, Holden Clough, Clitheroe.

THE DEODAR CEDAR.

If there is a conifer that in the last fifty years has been planted more largely than any other it is probably the Deodar Cedar, and planters have not, as a rule, had reason to regret the selection. This has not been the case with many others. Some, as *Sequoias* and *Araucarias*, have, as they grew into trees of considerable size, proved totally unsuitable for the sites chosen for them; others, as *Cryptomeria japonica*, go on satisfactorily until the leader gets into the wind line, when they are invariably crippled, whilst yet others are affected by certain soils, growth is ragged, and the tree, as a specimen, unsightly. I hardly think that any of these objections would apply to the Deodar. There are very few positions for which it is not suitable; its leader is not, as a rule, injured, and it is also not very particular in the matter of soil—at least it is to be found doing well under very diverse circumstances. One thing, however, I have specially noted, that difference of soil will materially alter the manner of growth. Sometimes the tree runs up quickly to a very considerable height with but a slender stem, whilst in other cases the trunk develops quickly at the

expense of rapidity of upright growth. It is too early to express a decided opinion as to the dimensions likely to be attained by this Cedar. It was introduced so lately as 1822, and consequently no comparison can as yet be drawn between it and the Lebanon Cedar, which has been in the country over 200 years, but I fancy on some soils the latter tree will have to give way to the Himalayan Cedar. I say on some soils, because doubtless to the difference in this respect is to be attributed the corresponding difference in the habit of growth of the Lebanon Cedar in two separate places, perhaps not so widely apart, to be noted in the nature of branch development and increased density of foliage. In those places where the latter characteristics are answerable for the early mutilation of the tree by gales and heavy snowstorms there should be no hesitation in substituting the Deodar when any Cedars are planted; its finer growth and more drooping habit are safeguards against the breaking down of branches. An inspection of some score or more trees that were planted here between 1850 and 1860 in different parts of the pleasure grounds shows that in every case they are doing remarkably well, varying a little in their manner of growth, but all clean, healthy, well-balanced trees. On small lawns and in any positions where it is not advisable a tree should go higher than some 30 feet, the glaucous variety of the Atlas Cedar, a beautiful tree that makes a small, but very shapely specimen, may be substituted for the Deodar. E. BURRELL.

Claremont.

THE ENGLISH YEW.

It is a pity there are not authentic records as to the age of some of the remarkable specimens of English Yew that are to be found occasionally in our churchyards or in some of the "coombes" of our down land. We may hazard a guess, and possibly think ourselves near the mark as to the age of the churchyard patriarchs, associating their planting with the earliest record of a church in the same spot, but it has often seemed feasible that the largest Yews reach further back than such records, and that they were contemporary in their infancy with still earlier buildings of which no trace remains. This inference is forced on one when there is an opportunity of measuring trees of whose age we can speak positively, contrasting the progress they have made in the time with the enormous girth of some of the largest known specimens, and also comparing the young Yews with other species of trees. In the planting operations associated with the laying out of the grounds here Yews were somewhat freely used, and are to be found in circular groups, in cross avenues and as isolated specimens. This planting was carried out in 1770, giving them an age of 125 years, and a measurement of a few trees taken here and there shows them to run from 25 feet to 30 feet in height, with a diameter of bole from 24 inches to 30 inches (the latter exceptional) at 3 feet from the ground. Naturally, where somewhat crowded either by their fellows or by other trees they are lacking in symmetry, but isolated specimens are very shapely trees, throwing their branches far and wide. As against the measurements of the Yews I should like to chronicle one or two made of other trees that were planted at the same time to show the difference in the rate of growth. Many of the Lebanon Cedars are 70 feet high and girth from 15 feet to 18 feet, verifying the contention of the late Mr. Marnock that, given a congenial soil, this tree was of fairly rapid instead of slow growth. The majority of the Silver Firs would girth about the same as the Cedars, but are nearly 100 feet high. These are going to the bad rapidly, forming in their decay a striking contrast to the luxuriance of the Yews of similar age. The knowledge gained as to the Yew's rate of growth furnishes an ample reason as to why large specimens are so seldom found in private pleasure grounds. There are few of these that have remained unaltered for centuries.

Claremont.

E. BURRELL.

## CHRYSANTHEMUMS.

### CHRYSANTHEMUMS FOR MARKET.

With flowers, as with other things, time and fashion work wondrous changes. Many things which held a foremost position with the older generation of gardeners are now relegated to obscurity. This cannot, however, be said of the Chrysanthemum, for, looking back through a period of thirty years, one sees it advancing slowly at first, and then by leaps and bounds to its present high state of popularity. It is doubtful whether the Chrysanthemum would have become so popular and been so largely grown for market had raisers of new kinds never had the Japanese varieties to deal with. These are so showy, generally so free of growth, such a large amount of bloom can be taken from a comparatively small area, while they lend themselves much better to the rough-and-ready cultural methods of the grower for profit than do the incurred kinds. By their means it has been easy to produce that enormous amount of bloom in an inexpensive manner that fills up the London and large provincial markets for several months in the year. The Chrysanthemum season may be said to commence about the middle of September and last almost until February. Instead of Chrysanthemums being, as was the case but a few years ago, very expensive at the festive season, they can be bought almost as cheaply then as at other times of the year. Not much more than ten years ago a house 100 feet long filled with Chrysanthemum bloom in midwinter was thought something out of the common, but to such an extent are the late-flowering varieties cultivated now, that one may find in our London market gardens as much bloom at Christmas as would have been produced twenty years ago in all the market gardens about the metropolis. It is not uncommon during the season to see a whole vanload of Chrysanthemums sent into Covent Garden by one market grower. The

### OUTDOOR CULTURE

of this flower has of late been much developed. Not only are the early-blooming kinds very largely grown, but the later blooming hardy varieties are produced in much greater quantities than formerly. These are, of course, much influenced by the weather that may happen to prevail at their blooming period. Sometimes a hard frost will kill or much injure them, but in a general way they now form an important feature in the London flower markets in late autumn. The past season was unusually favourable to this flower. The rainy summer favoured a luxuriant growth, and there was not frost enough later on to check flower expansion. It has thus been possible to form a correct idea of the extent to which these hardy Chrysanthemums are grown for profit in the neighbourhood of London. It would almost seem that as much ground is being given to them as to the Wallflower, for this year the blooms have been brought to the London markets in the same manner as is practised with that fragrant flower. Wagon-loads of vegetables topped up with these hardy Chrysanthemums have been frequently seen this season in Covent Garden. Probably no Chrysanthemum has been so largely grown as Madame Desgrange, but there are signs that its reign of popularity is on the wane. Complaints are made of its want of purity. Florists cannot employ it where flowers absolutely pure are indispensable, and they say "it does not go" with white flowers generally. When grown

in pots and accorded high culture, the flowers come pure enough, but this method of culture does not pay much, and planted in the open it is much influenced by the weather, the yellow tinge being more or less pronounced, according as the season has been favourable or otherwise to the growth of the plants and expansion of the blooms. Sometimes the foliage is affected by a kind of disease which partially cripples the plants and spoils the purity of the flowers. The newer Lady Fitzwygram seems likely to rival Madame Desgrange, but whether it will prove sufficiently reliable in the open air and will suit market requirements can only be determined by two or three seasons' trial. If raisers can give us a variety as good as Elaine of a robust habit and early enough to bloom in the open air in September, they will earn the thanks of growers for profit. Ryeoort Glory and Comtesse de Careil are certainly very useful additions to this section of a large family, and are sure to be largely grown. Except when the plants are to be sold, I feel sure that it will not pay to grow any of these early blooming kinds in pots. The little increase in quality will not compensate for the extra expense involved by pot culture. The culture must be simple, sheltering the stools in frames in winter, dividing and planting out in good ground towards April. Some who grow Mme. Desgrange largely protect with canvas during the flowering time, and no doubt this pays taking one year with another. In some years a sharp frost occurs in the latter portion of September, and the man is happy who has then half an acre of this Chrysanthemum and its varieties. When Dahlias and other tender flowers are cut off and unprotected Chrysanthemums are injured, the price of blooms in good condition naturally goes up. It is hardly correct to call Elaine, W. Holmes, and Source d'Or midseason varieties. They are really second earlies, coming in several weeks before the Chrysanthemum season fairly commences. These three kinds probably pay as well as the latest ones, and certainly much better than those that are marketed from the beginning of November up to Christmas. Good blooms of Elaine and W. Holmes will often make more in mid-October than those that are retarded up to the close of the year. Fairly good flowers of the latter realised 4d. each last season, and a Chrysanthemum must be very good indeed to make so much at the festive time. This comparatively high figure is only to be obtained from the earliest blooms, and can hardly be secured from lifted plants. The great bulk of these second early varieties brought into Covent Garden is very poor, being produced by plants grown on the rough-and-ready method. If grown in pots they can be put under cover without sustaining a check, can get the full sun and being well fed will come on rapidly. These three varieties can be had all through November by means of late stopping and keeping them in the open as long as possible. I do not think there is much advantage in treating Elaine in this way, as we have plenty of good whites that can easily be had early in November, but the mixture of crimson and gold in W. Holmes renders it such a favourite, that one is justified in prolonging its season as long as possible. Among later varieties that bloom from the beginning of November till the middle of January, Avalanche, Sunflower, Gloire du Rocher, Stanstead White, Edwin Molyneux and Felix Cassagneau are among the best and are all easily grown. Callington is still one of the best high-coloured kinds, but it does not make any great quantity of fibrous roots when planted out and is apt to suffer when lifted.

Grown in pots it is very satisfactory and will yield as much bloom from a given space as almost any Chrysanthemum. Edwin Molyneux is, however, much stronger in growth and the flowers have none of the much-admired old gold tint in them. It is not necessary to grow both, and for November and the early part of December I should prefer E. Molyneux. A. Dufour is a good kind for cutting, bearing an abundance of rosy purple flowers, the habit being all that could be desired. Mlle. Thérèse Rey, Mrs. E. G. Hill and H. Shoemith will be grand for market work if they will adapt themselves to the market growers' cultural methods; if not they will, however fine, be valueless for profitable culture. Numberless fine varieties are shut out from our markets through not being sufficiently free-flowering or robust in habit. This remark applies especially to that period when the London markets are glutted with Chrysanthemums. The prices then range so low, that only the simplest culture applied to the most prolific kinds will yield any profit. The amount of glass now occupied by this flower is enormous, the rule being Strawberries, Tomatoes, and then Chrysanthemums.

Propagation from cuttings is rarely resorted to; the old stools are pulled to pieces, dibbled into light soil in frames, kept hard and sturdy, and set out in beds at the latter end of April or early in May. A large proportion of the blooms thus produced are of very indifferent quality, but they meet a want, and the cultural expenses are, of course, very small as compared with those involved by pot culture. A few years ago all Chrysanthemums that came in after the first week in December were classed among the late bloomers, but the flowering time has been extended so far into the new year, that a variety which cannot easily be had in good condition at Christmas must now go with midseason kinds. A very prominent place among

### LATE VARIETIES

has this season been taken by W. H. Lincoln. This is undoubtedly the best of the late blooming yellows. The flowers are fine in form, rich in colour, of good substance, and the growth is sturdy and dwarf. It appears also to be but little susceptible to mildew, a very important point in the case of market Chrysanthemums, which, owing to the way the plants are crowded when housed, are apt to suffer much from this disease. There is no difficulty in having good blooms of this in the middle of January. W. H. Lincoln has had a warm welcome from the florists, which of course means much, but another year's trial will be necessary to fully determine its merits. Of the well-known Golden Gem it would be difficult to say too much. It is in every respect reliable, and can be had in fine condition from mid-December till the end of January. It is indeed a rare January Chrysanthemum, and I think it will hold its own for some time to come. Few Chrysanthemums will yield so much for a little trouble as Golden Gem. I have this season taken a lot of nice flowers from plants that have been three years in the same pots. They were cut back hard, turned out of doors in April, and were occasionally watered with liquid manure. It is not many Chrysanthemums that would give good results under such treatment. Golden Gem varies wonderfully in colour, according to the season at which the blooms open. Those that commence to expand early in December develop a lovely shade of apricot, which is most pronounced when a certain amount of disbudding is practised. The later plants that come into flower about the middle of the month show little or nothing of this coloration, the flowers

being of a clear yellow. *Boule de Neige* is, I consider, one of the most useful *Chrysanthemums* we have. It gives less trouble than any variety I have ever grown. It is dwarf, but vigorous, requires no staking, no stopping and is mildew-proof. Housed in the first week in October, it comes in nicely from mid-December to the new year, but it is of no use for January cutting. Its place can then be taken by *Lady Lawrence*, acknowledged as the finest late white, but, unfortunately, very subject to mildew. *L. Canning* is a worthy

gives just the variety of colour so much needed, for without it one is reduced to a dead level of yellow and white at the close of the year. *E. Molyneux* can also be had tolerably late, but is not so reliable as the foregoing. For very late bloom, say from the second week in January up to February, pot culture is decidedly best and I am inclined to think pays, for at that time there is a marked rise in price. It is difficult to keep the foliage in good condition after December on lifted plants, but it is easy to do so with well-rooted pot plants, and if the leaves

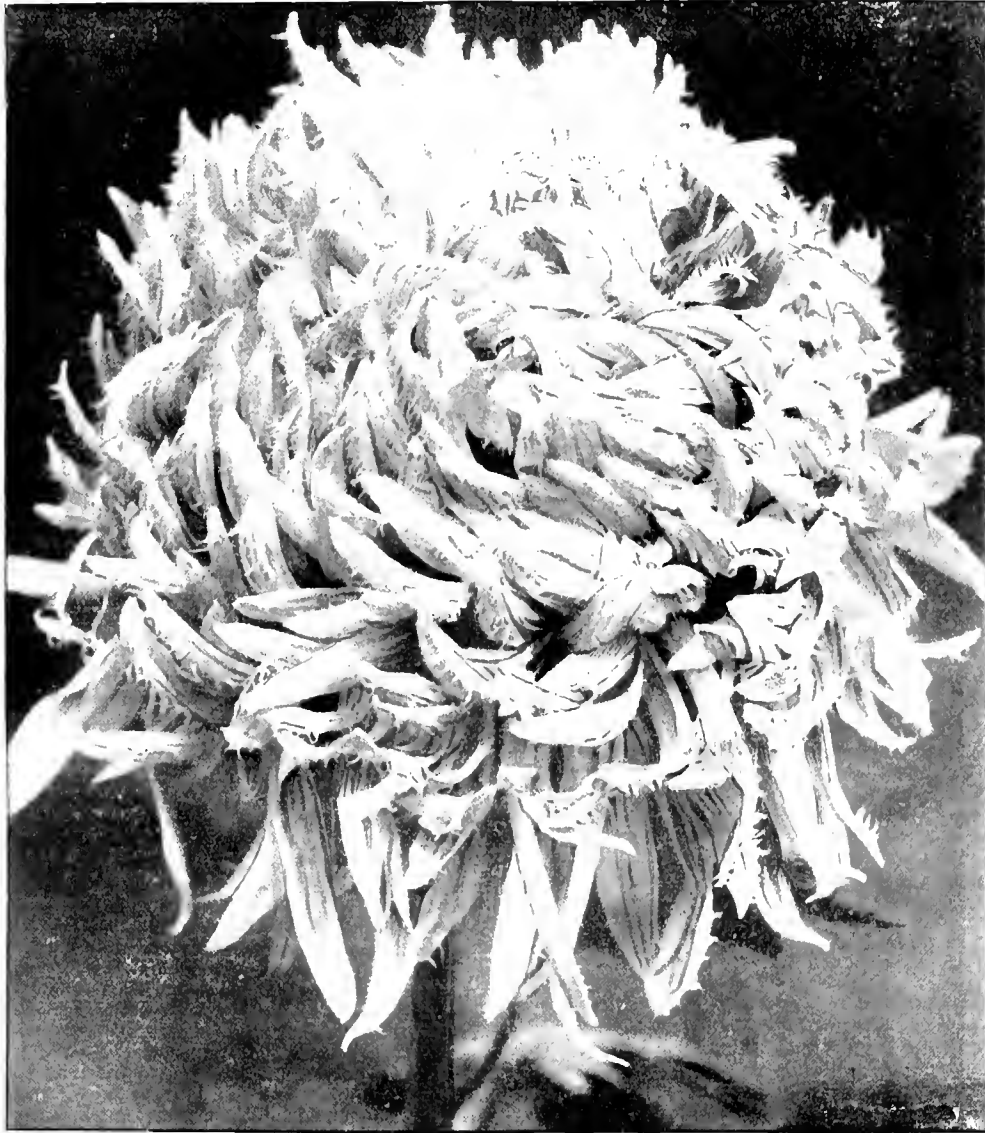
lected. To secure the crown bud at a suitable time for taking, the plants must be stopped the last week in March or the first week in April. As soon as the plants break from the stopping, a single shoot is taken up and grown on in the ordinary way, the crown bud showing the first week in August or thereabouts.—A. Y.

JAPANESE CHRYSANTHEMUM  
VAUCANSON.

A VERY few years ago it was the custom of the *Chrysanthemum*-growing fraternity of Toulouse to refer to that city as *le berceau du Chrysanthème*. For a period extending over sixty years the amateur and professional growers there had been indefatigable in their efforts to improve the flower by their seeding and selection of the numerous varieties that they obtained, but during the past seven or eight years raisers have sprung up in other parts of France who bid fair to eclipse even the most successful of the southern growers. Some little suspicion of coming events seems to have been present in the mind of a writer in the "Annales de la Société d'Horticulture de la Haute Garonne" (vol. xxxv., 1888), where he concludes a report on the society's work by referring to the extension of *Chrysanthemum* culture, and advises the amateurs and nurserymen of Toulouse to double their care and their efforts if they wish to maintain their position at the head of the *Chrysanthemum* world.

Whether this friendly counsel has been laid to heart by the growers of Toulouse it is difficult to say, but it is beyond doubt that Grenoble has in recent times acquired a reputation for new seedling *Chrysanthemums* the like of which Toulouse never possessed. The name of Ernest Calvat has become inseparable from the town of Grenoble, but even he is not alone in the work of seedling-raising in that town.

The variety selected for illustration in this week's issue, *Vaucanson*, is a Grenoble seedling raised by M. Ad. Testout, and was sent out by M. Hoste, of Lyons, in the spring of 1893. It was reported upon by M. Viviani Morel in the *Lyons Horticole* for January 15 of that year, but in what terms I cannot say, not being in possession of the number in question. At that time some little interest was being taken in the new section of hairy *Chrysanthemums*, and *Vaucanson* with others, such as *Chrysanthémiste Délaux*, *Enfants des Gaules*, *Mireille*, *Sautel 1893*, *Souvenir de l'Ami Coye*, and several others of less repute, were imported by Mr. Jones, of Lewisham, to meet the popular demand in this country. *Vaucanson* was at the time described as a seedling from Louis Boehmer, crossed with the American variety *Mrs. Andrew Carnegie*. The distributor pointed out that its colour, dark violet-amaranth, with a lilac reverse,



*Chrysanthemum Vaucanson.* From a photograph sent by Mr. H. J. Jones, Ryecroft Nursery, Lewisham.

companion to it, but I have not had enough experience with this to know if it can be grown on the planting-out method. *Princess Blanche* is a very late white that can be had in February. It is dwarf and free-flowering, and plants some 18 inches high will carry a score of nice pure white blooms. I should say that this would be good for marketing in pots at this time of year. Cullingfordli I have always found extremely useful at Christmas and the new year. I have generally grown my plants of this in pots for late bloom, stopping them at intervals through July and housing them about October 6. It

remain green the flowers will expand and stand well for several weeks. J. C. B.

**Chrysanthemum Bouquet de Dame.**—I was glad to see the note on this excellent early white *Chrysanthemum* by "E. M." It has a certain refinement about it when grown for large bloom—not to be met with in the majority of other white kinds, although these may be larger. For coming in before the majority of late October and early November varieties I grow a fair number both of *Bouquet de Dame* and *Mme. Louise Leroy*, both being excellent for the purpose. To obtain good flowers the crown bud must be se-

quite new in its class, and this is undoubtedly the fact. Under English treatment the flower is large, very hairy, as the illustration shows, having sharp pointed florets, forming a very globular, solid-looking bloom of the Japanese incurved type. The blooms which first came under my notice were those grown by Mr. Jones in the year of its introduction, when I paid him a visit as late in the season as November 27. I also saw it again in the Ryecroft Nursery on November 3 last year, and again at a meeting of the N.C.S. floral committee on the 21st of the same month. On

each occasion it seems to have been a characteristic bloom, for my notes of its description specially allude to the Japanese incurved form of the flower, the great length of floret, and the sharply pointed extremities.

To those who admire varieties of this peculiar section, *Vaucanson* is undoubtedly an acquisition and worthy of cultivation. If less chaste in appearance than *Enfant des deux Mondes*, it has not the feeble constitution of *Mrs. Alpheus Hardy* nor the dull, unattractive colour of *Louis Boehmer*. It is larger in size than either of these, more globular in build, and a more massive flower in every way. The chief aim of those growers who are now devoting themselves to the hairy varieties should be improvement in constitution, build and colour. When this is accomplished, hairy *Chrysanthemums* may become much more popular than they are now. Although it is too early in the year to give any estimate of the number of new hairy varieties that we shall receive from France or America this year, it may be useful to mention that one seedling grower informs me he will distribute seventeen varieties of his own raising.

In conclusion, it may be observed that *Vaucanson* is of a deeper and better colour in every respect than *Louis Boehmer*. It is a variety that offers no difficulties in the way of cultivation. Its season is the month of November, as will be seen from previous remarks, and it has the advantage of not being over-tall, about 4 feet being its height. To secure large blooms, crown buds should be taken in August, and the size of pots for the final shift should be 10 inches.

C. HARMAN-PAYNE.

#### CHRYSANTHEMUMS FOR THE NEW YEAR.

LATE-FLOWERING *Chrysanthemums* are so valuable for cutting, that I always grow a good number of them. It may be of service to some of your readers if the names of those now (January 4) in full bloom are given. Of large-flowering Japanese kinds, *W. H. Lincoln* is the best. This has been written of as an early-flowering kind, but by selecting the terminal buds and reducing them to from nine to twelve on a plant, good blooms can be had at this season, and the deep yellow or golden colour of the flowers makes them most effective. The habit, too, being naturally dwarf and the foliage also good, enhance its value, as the plants may be used for house decoration. Its one drawback is that it requires dis-budding, small flowers being neither shapely nor effective. Of the same colour is *Golden Gem*, a most valuable kind when well grown. It requires quite different treatment from the foregoing, as dis-budding entirely spoils it. It should be allowed to develop all its buds, then beautiful sprays of flower will be the result. I do not think that this kind is grown nearly so much as it deserves, probably because it has been found wanting in size even when dis-budding has been practised, and the colour, too, suffers under such treatment. *Chrysanthemums* vary greatly in their lasting powers when cut, but I find this variety quite one of the best stayers we have. *Boule de Neige* is also an excellent variety, and it should be treated precisely the same as *Golden Gem*. It is even more free-flowering than that variety, and both kinds being naturally late-flowering, no special treatment is needed to get them to bloom at this season. The flowers are pure white and remind me very forcibly of those of *Ethel*, which it greatly resembles, the difference being in size, *Boule de Neige* being small-flowered. All the above-mentioned kinds carry their foliage very well indeed. *L. Canning* is a pure white, large-flowered, reflexed Japanese. I have it in good form now on dis-budded plants. The only doubt I have about it is that it is not

free-flowering enough to make it very profitable. *Mrs. E. W. Clarke* is another large late kind, and belongs to the incurved Japanese class. In addition to its lateness it has the charm of being violet-scented, and its colour, amaranth, is rare at this season. *Pelican* is a very fine kind for late work, and its creamy-white much-curved florets make it a very attractive variety. The last on my list is *Christmas Eve*, or *Mrs. H. Cannell*: unfortunately, the same variety has been sent out under both names. When well grown it is magnificent. In size—I do not mean depth—(mere lumpiness of bloom I hate in a *Chrysanthemum*), in form, and in the purity of its whiteness it is unsurpassed. The great height of the plant is its one bad point. Like the three foregoing, it must be dis-budded to get it in good form; if not, it will show an "eye" that spoils its purity.

In addition to the above I have still very good blooms of *Lord Brooke*. This I have yet to prove for late work, its lateness this year having probably been due to late striking. There is, however, no mistake about its lasting powers, as blooms that were fully expanded some weeks ago still look quite fresh.

J. C. TALLACK.

**Striking *Chrysanthemums*.**—A trade grower recently remarked to me that it was a bad plan to propagate *Chrysanthemums* from plants that have been highly fed. The cuttings, he observed, might look stout and the growth of the plants afterwards appear strong and satisfactory, but in the end unripe wood, blind buds, and deformed blooms result. Far better is it, he observed, to increase the stock from plants grown under the non-stimulating treatment, even though they should be smaller and less taking in appearance to start with. In proof of the truth of his assertion I may mention that a batch of plants grown near here for the production of large blooms and raised from ordinary decorative stock produced flowers deeper and more solid, though somewhat smaller and less coarse than are generally seen. Moreover, the flowers lasted much longer in good condition.—J. C.

***Chrysanthemum Etoile de Lyon*.**—I was not aware until recently that this variety could be had in such good condition so late in the season. Only lately I saw in a small nursery in the midlands a good stock of it in really good condition. The plants had been grown on two in a 9-inch pot, stopped fairly late, and not subjected to any feeding. They were kept out in the open as late as possible, being, of course, protected from frost at night, and when brought indoors were placed in a cool house. The petals were not coarse, as is generally the case with large blooms of this variety, and the centres were nicely filled up, which can seldom be said of the various late whites. Those who need white flowers in January will do well to give *Etoile de Lyon*, grown on the above principle, a trial.—J. C.

***Chrysanthemum Miss Dorothea Shea*.**—"Grower," in his notes on "*Chrysanthemums at the Royal Aquarium*," mentions a bloom of this variety as being the best in the whole exhibition. It would be interesting to know the height of the plant the bloom was taken from. I have secured large flowers and of good colour of this variety, but the plants which produced them grew to the height of 9 feet, and I do not think I shall grow it again, as a plant which grows to this height before giving its best bloom is useless to me. The height given in catalogues is 5 feet, but the flower produced at this height, and which is from the first crown bud, is very poor. If the best flowers are only to be secured from terminals, then this and the height the plant will ultimately attain should be given. According to my experience, *Chrysanthemums* which grow tall before producing their best flowers are of little use.—A. YOUNG.

***Chrysanthemum Golden Wedding*.**—Anent my note of the above variety (p. 514, last volume), "A. Y." inquires (p. 9) whether the

failures to which I referred are not the result of over-feeding. For the majority I cannot say, but speaking of it in two instances which came under my notice, failure was certainly not due to "over-feeding," or, indeed, feeding at all, as we usually accept the term. In the one no chemical manures were applied at all, and in the other soot-water and top-dressings of soot were used periodically. Yet, notwithstanding, several plants in both instances perished, and to the growers of them the reason is by no means clear. The manner of their dying off is, however, quite compatible with over-feeding, and it is possible that over-watering may be at the root of the trouble. The demand for it has been large, and no doubt a large portion of the stock has been raised from "eyes" only. Such as these could not possibly possess the vigour of good root cuttings. When these latter are plentiful we shall no doubt see *Golden Wedding* in its true form.—H.

#### SEASONABLE CULTURAL NOTES.

THE earliest inserted batch of cuttings in a closely fitting propagating case or under handlights in a cool house will by this time have become nicely rooted. To strengthen the growth, air should be admitted by tilting the lights on one side a little at first, increasing the quantity as the young plants become inured to the air. Any cuttings that flag should be placed in a separate light so that they can be kept closer until they will bear exposure freely. The strongest growing varieties are those that root first. When the plants will bear full exposure to the air without flagging they should be stood close to the glass in a cool house so that the growth will be stocky. Much depends upon the manner in which the foundation of the future plant is laid.

I fear many plants are spoilt during this stage: they either are too much crowded or have too warm quarters assigned to them. *Chrysanthemums* should never be subjected to artificial warmth beyond what is necessary to keep out frost. If this rule is strictly adhered to we should not hear so many complaints about the excessive tall growth of certain sorts which are really under favourable conditions naturally the opposite. A shelf suspended to the main rafters in a cool house affords a capital site for the young plants until they are ready to be transferred to the frames. The shelves may be about 9 inches wide, according to circumstances, and on each side there should be a groove to run the water off to one end. Here the plants will obtain abundance of light and air, which is just what is required. The plants during this stage should be carefully watered, never allowing the roots to remain dry for any length of time. When the plants are thoroughly well rooted and before the small pots in which the single plants are growing are quite full of roots, they should be shifted into larger ones. One of the greatest mistakes a cultivator can make is to allow the roots to become matted together before the plants are transferred to larger pots. The advantage of striking the cuttings singly in small pots will now be apparent, as the plants are easily repotted without giving them a check. When several cuttings are placed in one pot, the disintegration of the soil from the roots that must of necessity take place in transferring them to single pots must check the growth. As it is not wise to use pots too large to flower them in, some thought must be bestowed upon this phase of culture at the present time, or when the time comes for the final potting it may be found that the plants already occupy pots too large to admit of their going comfortably into those in which they are to flower. For single plants pots 9 inches in diameter are large enough. If larger are in stock—say 10½ inches or 11 inches—I advise that two plants be grown in each; they grow equally well, less space is occupied, and surplus pots are utilised. The present or first shift from the cutting stage should be into those 3½ inches in diameter. The next time, if 5½-inch ones are employed, no difficulty will be felt in finally transferring them to the flowering size.

The soil used for this first potting should consist of two parts fibrous loam, one part leaf soil and one part spent Mushroom-bed manure, with a free admixture of sharp silver sand. If the loam is inclined to be heavy, add crushed charcoal freely. For the greater convenience in potting pass the compost through a coarse sieve, rubbing the fibrous pieces through also. The pots should be carefully drained and quite clean. Over the crocks place some of the rougher parts of the soil and pot firmly. If the soil is moist when used, as it should be, no water will be required for a day or two. Return them after potting to their former position on the shelves till the roots run through the soil to the sides of the pots. Any plants that need support to encourage them to grow erect should have a small stake placed to them.

E. MOLYNEUX.

## FLOWER GARDEN.

### THE AMERICAN ALOE.

(AGAVE AMERICANA.)

THIS is now a roadside weed in many tropical and sub-tropical countries, but it is not usual for it to be met with grown permanently in English gardens in the open air, even in the most favoured parts. In Mr. Dorrien-Smith's garden at Tresco Abbey, Scilly, there are good examples of this and other species of Agave which have withstood for years the winter's cold of that island without suffering, and in the gardens of several of the towns in South Cornwall the American Aloe is to be seen here and there as an outside plant. The plant shown in the accompanying engraving is in the garden at Tredarvat, Penzance, Cornwall, and it is an exceptionally large and healthy specimen for such a position. This plant will bear 6° or 8° of frost, or even more if the atmosphere is dry. On the Riviera it is abundant not only in gardens, but on roadsides; and on waste land near the sea one meets with large colonies of it in all stages of development, from self-sown seedlings to huge plants bearing pole-like flower-stems 25 feet or 30 feet high.

It is popularly supposed that the American Aloe takes about a hundred years to grow to the flowering stage. When starved it may live to that age, and even longer, without flowering; but in the tropics it flowers—"poles" is the correct expression, I believe—when from seven to ten years old. In South Africa it is used as a fence plant and lasts about ten years. Very strong plants have leaves 9 feet long and form huge rosettes 12 feet high by about 15 feet through, which when crowned with tall "poles" bearing large candelabrum-like heads of yellow flowers are very striking.

There are several species of Agave in flower now in the succulent house at Kew. As a rule all Agaves—and there are nearly 150 species—perish after they have bloomed once, but there are some which flower annually or at more distant intervals, and do not suffer in consequence.

W.

**Verbascum phœniceum.**—An apology is due from me to "J. E. N.," who recently sent a photograph and description of this plant to THE GARDEN, and I have now no doubt that the name was quite correct. I trusted too much to fifty years' experience in my own gardens in four different counties, but it appears that the experience of Mr. Arnott and Mr. Burton as well as of "J. E. N." is exactly the reverse of mine, therefore my negative evidence falls to the ground.—T. H. ARCHER-HIND.

—It is curious that this plant has never ripened seed with Mr. Archer-Hind, as it used

to seed freely with me in another garden a few years back. As regards varieties, too, Mr. Archer-Hind's experience differs widely from mine, for in several batches that I raised there was a fair proportion of white-flowered ones and many other shades of colour, from pink to deep purple-red. An important point to bear in mind regarding this plant is that the sun causes its flowers to droop. It does perfectly well in shade, and when direct sun does not reach the plants, the flowers remain open and fresh throughout the day.—A. H.

### THE GENEVAN PLANT PROTECTION SOCIETY.

TO THE EDITOR OF THE GARDEN.

SIR,—Allow me the shortest possible reply to M. Correvo's letter appearing in your issue of

was, I believe, M. Correvo's reply which first informed me of the laws in question, and that I have never taken any part against them. That which I need alone ask leave to add can best be said by reference to Mr. Ewbank's most timely and instructive note. This makes it clear that he is under the impression, as I know are so many others at home and abroad, that M. Correvo's usual practice is to collect blooms and seeds only of alpine plants (but not their roots), and not to sell collected plants. How could Mr. Ewbank gain any other impression if (as I am sure in this case) M. Correvo acted as described by Mr. Ewbank on the occasion to which the latter refers? For there is little or nothing that I can recall in all that M. Correvo has (publicly) written to correct that impression, and there is very much to confirm it. Further, his advertisements of his nursery (circulated by the association through hotels and otherwise) conveyed (if they do not still convey) the same impression, and no other. I assert with complete confidence and knowledge, and am prepared to prove my assertion before any tribunal, that that impression is completely erroneous; that he freely collects plants annually himself and by others, and that it is part of his business to do so. Mr. Ewbank refers to Eritriehium, and Androsace, and Gentians as plants which (he can testify) M. Correvo held sacred from the trowel. It is within my knowledge that in all three classes M. Correvo has collected for sale freely.

M. Correvo refers to my allegations as "malicious insinuations." What I want to know is how far he denies their truth. Whether or no they approve or disapprove Mons. Correvo's modes of proceeding, I believe that all fair-minded persons interested in the general subject of alpine plants will agree that it is unsatisfactory that the "censorship" over "collectors" should fall into the hands of one who is himself a collector, and who has every interest to license himself very liberally. As regards the rest of his curious and varied compilation of charges, I can happily afford to treat them with contempt. The motives are obvious, and I must wholly decline, even in self-defence, to afflict GARDEN readers with what I am fearing might really come to be thought of, however erroneously, as a quarrel between rival nurseries. One point, however, has really some little general interest, viz., how far should a nursery follow popular and garden nomenclature when it differs from botanical? Whatever may be thought on that matter, I imagine that those many botanists who are competent to judge him will be tickled at the spectacle of M. Correvo laboriously "straining"



The American Aloe at Tredarvat, Penzance. Engraved for THE GARDEN from a photograph by Mrs. Ross, Trevean.

January 12. He now alleges that four years ago I accused his society of being the authors of the Phylloxera laws, &c. To use the mildest language, this allegation is a gross misrepresentation, as M. Correvo cannot but be aware, unless he has burnt my letters to him on the matters he refers to. The facts are these: Four years ago a well-known plant-lover made to me an accusation that M. Correvo, or his association, took means to stop the collected plants of others at the Swiss frontier. I passed on to M. Correvo, and to him only (and surely this was no unfriendly act to him), the particulars of this charge, which was never my own. He promptly met it, gave the explanation which he indicates, viz., the existing Phylloxera law. This I at once forwarded to the proper quarter and set the matter right. It would thus not be incorrect to say that I was the means of disposing of the charge. It is simply false to charge me as the author of it. I may add that it

in public at such a comparative "gnat," when they have so frequently observed him "swallowing camels" without any apparent difficulty or discomfort.—H. S. LEONARD.

—Why M. Correvo should claim so much credit in the matter of seedling alpinists I cannot understand, unless in fact he keeps two distinct sets of plants. I formerly used to get an occasional consignment from him, but they were invariably collected plants which he sent, generally placed in pots a short time before they were started off, and they as invariably died. Two friends of mine, both holding distinguished and responsible positions in the horticultural world, who were in his place at Geneva some time ago assured me that they saw little else but collected plants there. I do not object to collected plants; many thousands come here annually. Of course they require some care to become established, but when they are established, who knows or cares whether

they were raised from seeds here or on their native mountains. This hue and cry about collected plants is all nonsense. I should like to ask how many home-raised seedlings can be had of say *Azalea procumbens*, *Matthiola Valesiaca*, *Rhododendron Chamæcistus* and many others I could name. Really the only point is that the plant shall be established, either in a pot, or in the open ground. This being so, the rest is easy. Such plants are capable of thriving elsewhere under ordinary conditions, but when collected plants are sent out as established, and in that belief are treated as such, disaster is pretty certain to follow.—T. SMITH, *Nerry*.

## NOVEMBER AND DECEMBER FLOWERS IN SOUTH DEVON.

TO THE EDITOR OF THE GARDEN.

SIR,—I read with some interest the article on p. 496 of THE GARDEN headed "November in South Devon." My experience as to temperature and weather has been much the same as that of your correspondent, and the wet has interfered greatly with all gardening operations. There was a fair amount of bloom in the open throughout November, and this state of things continued in a less marked degree through December. Chrysanthemums have been very handsome, producing as large blooms in the open in many cases as in pots. I formed a small plantation in the back garden, chiefly of last year's plants, and have had a continuous supply of cut bloom till the frost came. On November 24 I had the following varieties in beautiful bloom outdoors: Vivian Morel, Gloire du Rocher, Beauty of Exmouth, Florence Davis and several others. Two or three plants of Florence Davis continued producing fine large blooms till the last day of December. There are still flowers on the plants, though at last much disfigured by frost. It seems to me one of the best for outdoor planting. Besides Florence Davis I have during December had the varieties Louis Boehmer, E. W. Beckett and W. A. Manda blooming well in the same plantation. The last-named is still fairly good in spite of the frost, though the flowers are small and, through never having been disbudded, a little crowded.

As regards other plants, I have had the following in bloom outdoors during November and the greater part of December: Chrysanthemum frutescens, China Roses, splendid clumps of *Schizostylis coccinea*, *Laurustinus* and *Arbutus*, yellow Jasmine and several *Antirrhinums*. Throughout November and until the early part of December I had a fine shrubby *Alonsoa incisa* producing a mass of scarlet blooms on one rockery, while at the base of another an *Ourisia coccinea* continued for a long time to produce its red trumpet-like flowers, the soil about it having been made very heavy and firm. At the back of an old rockery, and sheltered to some extent by a wooden fence and some *Cupressus macrocarpa* behind, is a fine shrub of *Genista fragrans* (*Cytisus racemosus*), which I found when I came to Teignmouth in June, 1893. Many of its higher shoots were cut down by the frost of January, 1894, though the shrub as a whole passed well through that winter. This winter it has not suffered appreciably yet, and it was in beautiful bloom on Christmas Day. No doubt it will now have a rather severe check. Besides the above decidedly half-hardy plant, I may mention that most of the *Calceolarias* in my garden survived the short, but very severe frost of last January, and have done well this year, and also the *Eschscholtzia* (usually regarded as an annual). This last is in

a corner between a clump of Pampas Grass and a *Cupressus* hedge, and was here when I came. It shows no sign of dying. I believe the plants must have passed through the previous winter, when the house was unoccupied, and this was certainly the case in the garden of the neighbouring house where the *Calceolarias* are quite shrubby and have lived some years.

Returning to plants in bloom in December, there were cut on Christmas Day or picked the day before, besides Chrysanthemums and other plants mentioned before as in bloom earlier in the month or in November, two distinct species of *Veronica* (a white-flowered and a reddish purple species), one or two *Periwinkles*, a white *Godetia*, and a *Carnation Carl Selury*. This *Carnation* has been in bloom outdoors more or less abundantly since August. It is still in bud. This seems very remarkable for the time of year. Another most abundant bloomer which was still in flower in October was *Carnation Meta* (one of the section known formerly as *Painted Ladies*), the upper side of each petal being cerise and the under side white—a beautiful combination.

The frost and rather severe cold have at last come, and we have had the thermometer down as low as 27° or thereabouts for several days. I find it rather trying for my greenhouse plants, the warmest part where are several *Orchids* having gone down as low as 41° in the night, this at a time when *Laelia Dayana* is opening a fine bloom, the lip of which, I fear, may be rather deformed in consequence, and with *Laelia anceps*, *Oncidium unguiculatum*, and *Odontoglossum Rossi* doing their best also to flower shortly.

One *Chrysanthemum* continues to ornament the greenhouse well—W. W. Coles. One plant of this is just opening some fine blooms, and another has had very beautiful flowers for some time. It seems to me specially good for late flowering.

E. F. CLARK.

Teignmouth.

## FLOWER GARDEN NOTES.

PROPAGATING.—The question of the propagation of summer-bedding plants from cuttings will soon require attention, and although the actual numbers of such plants show a steady decrease with each succeeding year, the fact that nearly all that are used are spring-struck stuff is bound to make the propagator busy at this season of the year. If there is no special propagating house with hot water to supply the bottom heat, a substitute must be found for this in the shape of a rather deep pit well filled with good Oak or Beech leaves, with a little stable manure added in thin layers as the work progresses. There should always be the means provided of working inside the propagating pit, and if these do not already exist, it is advisable to throw out enough soil to allow for head room. If the pit is not of sufficient depth, leave space for a narrow path at the back and run up a slight wall, or, failing this, a fence of stout slabs to keep the heating material together. This may sound a very rough and ready arrangement to those who are provided with the best appliances, but it must be remembered that many gardeners have to furnish a lot of stuff under rather awkward conditions. One may regret the necessity for this, and advocate specially in such cases the strengthening of the herbaceous class, but until this is done and beds and borders have to be filled with other things, it is simply a question of doing the best under existing circumstances. With respect to the type of a good bedding plant to be ready by the end of May, it cannot be too strongly enforced that one thoroughly good plant is worth four or five leggy, stick-like subjects. A typical plant should be sturdy and stocky, breaking away well from the stopping and thoroughly well hardened.

The extensive use of *Fuchsias*, *Begonias*, both tuberous and fibrous, and *Antirrhinums* has greatly reduced the number of zonal *Pelargoniums* of average size, that is the *Vesuvius*, *Amaranth*, and *Jacoby* types, and with plenty of silvery *Centaureas* one can dispense with the *Flower of Spring* and *Bijou* types. I find the dwarf varieties useful for small beds or for massing in quantity round taller plants. *West Brighton Gem*, *Surprise* and *Golden Harry Hieover* are struck singly in small pots and pinched once or twice to ensure a sturdy plant. I am striking a batch of *Turtle's Surprise* this year for bedding. I fancy from its dwarf habit and free-flowering properties it should be an acquisition. The idea is to use it in connection with *Centaureas* or in quantity with occasional plants of *Eucalyptus*. Where any stock of special varieties of *Verbenas* and *Petunias* has been kept over from the preceding season, the stock pots may be placed presently in warmth, so that the young tops may come away by the time the cuttings are required. One of the earliest things to be started should be *Ageratum*. A good stock of it is always acceptable, as it is a wonderfully useful little thing for dwarf bedding arrangements. *Vesuvius* and *Mrs. Clibran Tropæolums* are two very useful plants in their respective shades of colour, and they possess the merit of doing well in poor soil, flowering profusely without rank growth. The propagation of any plants that are of rapid growth and come away quickly into good bushy stuff may be deferred until later in the season, such, for instance, as *Lobelias*, the variegated *Mesembryanthemum* and *Sedum*, and the *Iresines*. Any plants required for special purposes, as early planting in boxes, &c., should be among the first started, the trailing *Campulanas*, white and blue, *Harrison's Musk*, *Ball of Fire Tropæolum*, one or two good Ivy-leaved *Pelargoniums*, as *Mme. Thibaut* and *Jeanne d'Arc*, and a thoroughly good strain of *Petunia* are examples of such requisites. Young plants of *Heliotropes*, *Fuchsias*, and *Begonias* that are required for a similar purpose may also be moved along to be ready at the same time. Any herbaceous plants required for special work may also soon receive attention. Autumn-struck cuttings of *Antirrhinums* and *Pentstemons* may be boxed off or planted out in frames if any such are available, and rooted slips of *Phlox*, both the early and late-flowering varieties, inserted singly in small pots. Any stock of herbaceous *Lobelias*, too, that had to be lifted and have been wintered in boxes may be gone over soon, divided and re-boxed, allowing sufficient room so that they can presently be transferred to the open ground without any injury to the root. In this list of plants may also be included the *Marguerite* strain of *Carnations*, which are perfectly hardy and come safely through the sharpest winters. When kept on through the winter the grass should be thinned out, the best shoots pegged here and there to cover the ground, and a little soil or peat Moss manure where this is available shaken in among the plants. Seed of this strain can be sown early in February in boxes and placed in a vinery at work or in a propagating pit fairly well up to the glass, and if the seedlings are pricked off into a suitable compost so soon as they can be handled, nice sturdy little plants are available by the end of April.

Whilst on the subject of herbaceous plants I should like to note that if any small bits of new species or varieties are acquired, they should be planted in the nursery beds pending the opportunity of increasing as soon as practicable. In common, doubtless, with many others, I used to give them a place at once on the herbaceous border, the result being a wonderfully mixed up affair, with not enough of any one plant to make a creditable display. The spell of frost last week afforded an opportunity of finishing the mulching of herbaceous borders, enough peat moss manure having been saved for the purpose, and as there was a little to spare, the *Carnation* and *Viola* beds received the benefit of it. Any that can be obtained from the present time through next month will be transferred to the beds of *Polyanthus*.

**PRUNING DECIDUOUS SHRUBS.**—We have taken advantage of the milder weather to run through the quarters of deciduous shrubs that were planted (grouping species together as much as practicable) on sites from which brakes of old Laurels had been removed. There is a remarkable difference in the yearly growth of such young shrubs: some seem, as it were, to steady themselves with early flowering, as the Altheas and Ribes, and make little headway, whilst annual growth on Weigelas and Syringas is very rank. The pruning is naturally only a matter of heading back a very rank shoot and cutting anything awkwardly placed to a good break, as well as keeping the plants clear of each other. Cuttings are taken of all those things that strike readily in this way, and a few layers put down of specialities that it is desirable to grow into nice sized plants as early as possible. There is little room now between the shrubs for other things, but where an open space is to be found it is filled with a few Foxgloves, an occasional bit of *Chrysanthemum maximum*, and a few other tall herbaceous plants that are suitable for such positions and stand out well between the shrubs. Several clumps of *Lilium candidum* were put in with the shrubs, and these remain, furnishing us, as a rule, with some very nice flower-spikes comparatively free from disease. E. BURELL.

Claremont.

**SIEBOLD'S PRIMROSE.**

NEXT to the popular Chinese Primrose the many varieties of Siebold's Primrose are without doubt the best of a large family for pot culture. Those who have seen the fine clumps in pots staged at the Auricula show in April, or the remarkable exhibits of them made by some two or three trade growers, will admit that of the hardier Primroses these are the most pleasing, varied and beautiful in pots. It seldom answers to allow pot clumps to remain in the pots over one year, as in such case the crowns and leafage become so crowded that they are weak and often incapable the succeeding or third year of producing flowers. Just now that roots are resting is the most suitable time to break up the pot clumps, select the crowns into sizes, and then re-pot. Six-inch pots are the best for ordinary purposes, and where the rhizomes are stout and carry strong crowns, then about eight or nine of them should suffice to fill a pot of the size named. Smaller roots may be planted more thickly, as probably few of them will flower, but all may make good crowns to bloom in succeeding years. In some cases, notably in nurseries, it is the rule to plant these crowns in shallow pans, and then when in bloom to lift the plants and block them more thickly into pots, so as to give an equal head of bloom. In other cases crowns are put singly into small pots, and from these turned thickly into larger ones. It is best, however, to select crowns that are strong and place them in pots as advised, for the bloom product in such case is sure to be good. The growth is even and compact, the leafage forms a capital base, and the heads of bloom rising out from it help to render the entire clump a handsome object.

Japanese Primroses like a compost of good turfy loam, old decayed manure and sand in suitable proportions. The pots should be filled up to within about 1 inch of the top with this compost, and it may be gently pressed down. Then when the rhizome crowns are evenly laid on the soil, gently pressed, covered with half an inch of fine sandy compost, watered, and then stood in a cool frame, a good start has been made towards the furnishing of a most useful and valuable lot of pot plants to flower freely in the spring. Ordinarily, the roots of these Primroses are hardy, but perhaps they suffer more from damp than from frost. Still,

it is well to keep them somewhat protected, yet not covered up too closely, in a cold frame lest damp should prove more harmful than frost would have been. Growth ensues very much according to temperature, but little or no root-action follows until leafage breaks, and if kept cool that is not until the winter has well advanced. If heat be permitted it should be of a very gentle kind, the pots being stood on a greenhouse shelf near the glass so that the foliage be not unduly drawn. The bloom-stems then soon break up, and where there is enough roots potted so that a succession may be maintained, it is thus very easy to have *Primula Sieboldi* in bloom in a greenhouse for at least three months. Except *Primula sinensis*, there are few Primroses, not even the garden *Polyanthuses*, that can be induced to flower over so long a period.

*Siebold's Primrose* will in favourable conditions do well outdoors treated as a hardy rock plant. Its impatience under moisture renders an elevated position on a rockery the best. For this purpose the dark red coloured forms seem best adapted. When so grown bloom comes in May and June, and the colours are richer and deeper than is the case under house or frame culture. Of course, too, the leafage is less drawn, but good clumps of such a variety as *laciniata* have been seen when in full bloom as amongst the loveliest of Primulaceae. Varieties are so many, that it is needless to enumerate them. They can be found in various trade lists, and when well grown as advised always prove to be very charming pot plants. A. D.

**ABOUT PLANT HARDINESS.**

I TAKE it that though the term "hardy" has a wide and useful application for us as English gardeners, it is, nevertheless, a relative or vague term. It is true that in regard to hundreds of well-known species the term may be in every sense of the word correctly employed, but when we take into account the vast numbers of species that during a man's lifetime may be introduced, to say the least the term "hardy" cannot equally or for all of us be reliably applied. We know that the native country or habitat of a plant is no certain guide as to whether it will prove what we generally understand by the term hardy in cultivation in our open gardens. It is a very common occurrence when amateurs are comparing notes for one to say, "I lose that plant every winter," and for his friend to say, "It goes on all right with me," and then on further inquiry, very often there is no ready evidence of much difference in the two climates, and certainly nothing in the way of a lower temperature on the part of the one who loses his plant to suggest that it has been lost merely from intenser cold. I say this is a very common occurrence, and I think we may reasonably at once despatch the idea that want of hardiness in a plant or enduring properties during a winter is in relation merely to the amount of cold in a given district. Doubtless the variability of our winters is alone accountable for the loss of many plants that under other conditions, say those of a covering of snow or even fewer or less wide variations of temperature, might come through safe even with more cold.

To the close observer very simple matters have led to important results. For instance, I find I can grow on an eastern slope sharply inclined some plants that do not in the same garden survive a winter on a similar western slope. This may not seem much to cause all the difference, but if we inquire into it, it implies a great deal. If you put the spade into the soil during winter, though the quality and texture of the soil may be alike in both cases, you may find the soil of the western slope soddened with wet and the other comparatively dry: and when we remember the redoubled grip afforded to frost by the agency of wet in the

land, it may amount to a great deal in the way of life or death to plants that are known to be, as it were, just on the dividing line of the "hardies" and the "doubtfuls." In speaking on this point I have especially in mind my experience with two or three plants, viz., *Onoclea sensibilis*, *Agapanthus umbellatus*, and *Gentiana ornata*.

On the other hand, I admit that there are many plants that are perfectly hardy, though I know scores of instances both in my own and other gardens where newly-planted specimens have simply been converted into pulp from top to bottom of their roots during winter. This occurs with many plants that might be mentioned, but I will only mention one or two in order more effectually, perhaps, to show that it is more a want of skill on the part of the gardener than of hardiness on the part of the plant. Properly treated, nearly all the *Alstroemerias* I venture to claim as hardy for Yorkshire, but certainly that statement must be qualified. It is the habit of all the *Alstroemerias* to embed themselves deeply in the ground, but if the planter in the case of a young plant places at what we may term for our present purpose the young specimen at its normal depth at first, it might not grow at all, and therefore if planted near the surface the roots should be protected for one or even two winters with a warm mulch either of manure or straw until the roots normally place themselves in relation to the surface. You might think it strange that a similar thing occurs with the favourite *Tropaeolum speciosum*, so hardy in Scotland. I question if half the difficulties we hear of in relation to establishing this plant are caused by anything more than the injury that occurs from wet and cold in winter to newly-planted specimens which of necessity are nearer the surface with their vital parts than the roots would be naturally in the case of an established plant. The roots and growing plants of this, like the *Alstroemerias*, may often be found at a depth of 2 feet to 3 feet, and a skilful gardener will afford his young plants surface protection during winter until the roots find their normal place. To further confirm this, when once you have well established this plant its roots are difficult to kill or eradicate. In short, to give many plants a fair test for the quality of hardiness we should know something about their root habit, and should never forget the fact that among plants that may fairly claim the property of hardiness there are as well hardy plants with tender roots as hardy roots with tender tops. To make what I mean a little clearer, the tender roots of *Alstroemerias* will send forth their young growths in spring that not nearly suffer so much from late frosts as a common Wallflower: and, on the other hand, the *Dicentra spectabilis* has a root which, no matter how near the surface, zero frosts cannot injure, but its early sprouts suffer with 3 or 4 of frost. I am now, of course, merely speaking to the point, that a hardy plant may have tender roots with hardy tops just the same as a tender-topped plant may have the hardiest of roots, and that the salvation of the tender and deeply-rooted species is only to be found in their deeply-rooting habit, and that the skilful gardener must nurse his young specimens accordingly for a time. There is, however, this important difference in the two classes here contrasted. In the case of the hardier rooted species you can afford to be more indifferent, as cold does not kill the plant, but in the case of the tender rooted subject, which from necessity as a young plant is abnormally near the surface with its roots, it must be killed unless you afford artificial protection to the artificially located roots.

Again, there is a form of plant hardiness which may be described as constitutional from culture as distinct from what one might speak of as the natural hardiness of a plant. This, looked on in the sense of contributory hardiness, is an important feature in the case of many species, say, bordering on the doubtful, as, for instance, in the case of species which generally have a liking for lime, as the Crucifers and Caryophyllac. The species of these orders are, I think I may safely say, of a hardier constitution when grown with

plenty of lime in the soil. It seems, so to speak, to give bone or robustness to the plants. Corresponding hardness of constitution, though otherwise perhaps of a different nature, comes about also in the case of most species grown with a full exposure to sunshine, other conditions being equally adapted for the plants, and when the subjects are not those naturally affecting shady positions. Or, to speak in more practical or every-day terms, skilfully and well-grown specimens are hardier than the individuals of the same species not well grown. I think this is so, though I know there are good plantmen who hold that a plant cannot be made hardier by culture or acclimatisation than it really is inherently. But this brings us again to the same point, and we have to ask, what is hardness or the inherent degree of the hardy property of any given species, and what are the conditions that enable us to arrive at a fair test? Take a common plant—the Wallflower. I know market growers who cultivate this and experience fear and trembling all through the winter for their broad plantings lest they should be killed, and I know others who have crops that rarely or never suffer in highly calcareous land, and to show that the opposite results are not affected merely by conditions of weather, there is to be seen, besides the hardier condition of the lime-grown crop, a habit of plant very different indeed, though the seed has all been of the same kind. The dwarfier, more twiggy and less leafy habit of the lime-grown plants clearly shows that their growth or culture has caused a change that has rendered them better able to stand the winter.

To show that some plants may be less hardy in captivity than in the wild state as regards cold merely is no difficult matter. When we take the records of the altitude and degrees of cold of the wild habitats, we directly arrive at the fact that when we rarely have similar low temperatures in this country, it is some other condition or conditions than cold alone which kill our garden individuals of the same species. For my own part, I have come to the conclusion that we get over many difficulties by the simple contrivance, of whatever form, that will enable us to keep our plants drier during winter, always supposing that the plant is an established one. I know this is no new doctrine, but how often do we find that, though believed in, it is not practised? There is another theory that I have pretty well satisfied myself about that may not be as generally accepted, and it is that, in view of our exceptional winters or climate, we delay the planting of so-called hardy flowers until too nearly in the teeth of winter. I do not believe that the system of late autumn planting could ever have originated on a more tangible ground than that of convenience; it certainly is not the best for the plant; and if we instance the scores or even hundreds of kinds of hardy species that are so treated and yet do well, it is no proof that they would not do better were they transplanted earlier. I have never yet learnt, either by theory or practice, that any plant had its winter sleep as healthfully when newly inserted as when earlier planted, and in which case it had the natural attachment to the soil, as it could not otherwise have when late planted. Perhaps you most completely compromise the late planting practice, by selecting for the purpose pot-cultivated specimens, which carry all or nearly all their summer roots intact, and this fact may be, as I believe it to be, the chief and best argument for pot-grown stock of hardy species. But even those pot-grown specimens remain, as it were, detached from the natural soil during winter when set late, and are liable to suffer unless great pains are taken to make the surrounding soil equable as regards density or texture in relation to that of the ball. We may miss our way with many plants that have capabilities of endurance by unskilled modes of treatment, and inasmuch as plants may die from other climatic conditions than cold, we have to consider the property of hardness in relation to our individual or peculiar climates, and adapt our gardening so that it does not combine, with the drawbacks of climate, to distress and kill our plants,

but rather alleviates climatic conditions, and so helps to sustain rather than weaken such species as may not have a superabundance of capabilities.

Woodville, Kirkstall.

J. Wood.

#### THE CULTURE OF THE GLADIOLUS.

THE papers of "Enthusiast" and my old friend Mr. Douglas on this subject have opened out matters on which I desire to say something. "Enthusiast" feels surprised that I should call the Gladiolus an unpopular flower, and adduces in proof to the contrary the immense quantities that he saw at the Langport nurseries of Messrs. Kelway and Son, and also the brisk trade that the firm carried on in cut blooms. But that is not what I mean by a flower being popular; I would rather imply by that whether it was extensively grown and also exhibited by amateurs. I call, for instance, the Rose or Chrysanthemum popular flowers, widely different as they are in character, because the number of growers and exhibitors in all parts of the country is very great. Show after show is devoted exclusively to these flowers, but he would be a daring man who would venture to start a Gladiolus exhibition. The late Rev. Joshua Dix did once get together a considerable sum, and offered some good special prizes at one of the R.H.S. shows at South Kensington. There was but little response and the experiment was never repeated. Therefore, as I have already contended, a flower cannot be regarded as popular which is only exhibited by two or three amateurs, and I quite agree with what Mr. Douglas says as to its being the most disappointing flower one can grow. I have personally known every amateur who during the past thirty years has come forward as an exhibitor. I have seen them one by one retire, and when I have asked the reason, "Oh! I cannot keep the things; they all go wrong." I have also known many nurserymen who have spent a good deal in attempting to get up a collection, but who have abandoned the attempt, saying that it was no use throwing money away on things they could not keep. Knowing what I do of those that have gone before, I am fully prepared for the announcement sooner or later that amateurs in the south have also given up in despair.

Mr. Douglas revives in his paper on the subject a point in which we two have had much controversy, viz., the supposed degeneration of the flower. He has always considered this was the cause of our losses. Perhaps in one respect he and I would agree, viz., that the individual bulbs of any variety, if taken up annually, will decrease in size and probably in vigour of spike. I have known bulbs of six years old from spawn still to give vigorous shoots and good flower stem, but unquestionably these are not to be depended on, and, so far, there is degeneration of the individual bulb, but this does not mean the degeneration of the variety. You can get as good bulbs of Meyerbeer as you could have done the year after it was let out—some thirty years or more ago. In the same way you can also obtain as good bulbs of Duchess of Edinburgh as were to be had five-and-twenty years ago. Now how are these obtained? Not from the division of the old bulb, but from the spawn saved from year to year; and I am surprised to find that Mr. Douglas speaks of these as also degenerating. They will flower in the second or third year and will afterwards follow the same rule as the older bulbs; but then in the cases of most varieties the supply of spawn is kept up, and although it involves some considerable trouble, this appertains to most flowers which are successfully cultivated, whether they be

bulbs or plants. Of course opinions will differ as to the desirability of raising seedlings, and Mr. Douglas's experience does not seem to be very hopeful as to retaining good ones when they are obtained. It is always a pleasing thing to raise new flowers, but it is a vexing thing not to be able to keep them. His experience is evidently not that of all, or else how could Messrs. Kelway and Burrell send out this year varieties which were raised some six or seven years ago? They must have been able to get up a stock. If, therefore, an amateur has both time and space at his command he can very easily follow out Mr. Douglas's directions and raise seedlings. Most of them, as in all seedling-raising, will be worthless, but he may get some gems amongst them. DELTA.

## GARDEN FLORA.

### PLATE 998.

#### THE MUSK ROSE.

(WITH A COLOURED PLATE OF R. MOSCHATA VAR.\*)

ALTHOUGH no other garden flower has such an extensive literature as the Rose, it is surprising that the artistic side of Rose growing has had so little attention. Nearly all that has been done is subservient to conventional methods, whose chief fault is that they represent to us but one aspect of the flower, and that the least beautiful from an artistic point of view. The consequence is that the Roses that nearly everyone knows and grows are those which produce fine double flowers. May they long continue in popularity, but those who want their gardens sweet and gay should not rest content with these alone. Happily, there seems a growing desire to plant the single types of this noble family. It is difficult to find in gardens such Rose pictures as may be seen by the roadside in June, when Dog Roses and Sweet Brier hang in wreaths from the hedges. Yet we may have them, and lovelier ones, too, if the picture that is annually created by the Rose here figured be taken as a guide. This is only one of many single Roses, but, so far as I have seen and grown them, the very best of them all. No words could possibly exaggerate its beauty. The plate here given shows its fine form, size, and delicate colour, but the picture that this Rose makes in the garden is wonderful. Although an old Rose, it is evidently scarcely known in gardens, but it deserves to be brought from comparative obscurity. In the "Rose Garden," Mr. W. Paul says that the Musk Rose is supposed to have been introduced into England about 300 years ago, and the scent of its flowers was thought to somewhat resemble that of Musk. The plant is described as being of rambling habit, producing its flowers in large clusters late in summer. Under this as being the type are enumerated several varieties, one of them being named *nivea* and thus described: "Flowers white, shaded with rose, large and single, form cupped, growth robust." This is quite in accordance with the character of the Rose here figured, and as the plants came to us under the name of *moschata nivea*, this no doubt is its correct name; but as to its origin or history I can give no information at all. The important point of all, however, is its value as a garden Rose, and there will be few to compare with or equal it for covering a fence, making a hedge, or to

\* Drawn for THE GARDEN by H. G. MOON at Gravetye Manor, Sussex. Lithographed and printed by Guillaume Severeys.







ramble in perfect liberty over some low-growing tree. It appears to be thoroughly hardy, the fence it clothes being open and fully exposed, and the growth is vigorous, although the plants are in poor, stiff soil. It has only one season of bloom, and I have never noticed the slightest tendency to secondary flowers in autumn, but it comes in welcome succession to the early Roses, being usually at its best during the middle and latter half of July, and lasting altogether about six weeks. The trusses of bloom are enormous, many of them having from thirty to forty buds and flowers in a cluster, and every one comes to perfection, whilst from six to ten flowers may often be seen fully open in one truss. The buds are of a lovely pink colour, and there are exquisite shadings of pink in the flower when first expanded, with a cushion of the richest yellow anthers in the centre, much brighter and more beautiful than they appear in the plate, retaining their colour for a long time, and adding considerably to the effect. The leafage, of a glaucous or grey-green colour, is abundant, making a soft and pretty foil to the flowers, which have a powerful and delicious fragrance. The great trusses that crown the strong shoots when cut continue to open their buds for several days.

A. H.

## THE WEEK'S WORK.

### FRUIT HOUSES.

**FIGS IN POTS.**—Figs, if the fruit is required in March or April, are often grown in pots. Under such treatment they give a good return and are forced more readily than trees planted out. There is also less dropping of fruit, and even small trees bear freely. I have for years grown Figs for early use, and it is surprising how the varieties differ as regards setting a first crop. Such well-known kinds as Osborn's Forcing or Brown Turkey, the White or Black Ischias, and Early Violet are reliable, but even these are inferior as regards cropping if ripe fruits are wanted in March. For later use, say the end of April or May, few varieties can excel Brown Turkey. I have seen Negro Largo recommended for early forcing, but I have never got what may be termed a fair crop. For late supplies it is the reverse, as with care this variety may be had later than most others. I admit it is more suitable for pot culture than any other mode of growth, and if grown as large bushes or in a small space it is a grand cropper. The most reliable Figs for very early supplies are the newer St. John and Pingo de Mel, which carry a heavy first crop and may be hard forced with less fear of the fruit dropping. I gathered the St. John early in March last year and of fair quality, small trees in 10 inch pots fruiting freely. Of course, to get fruit at the time named, the trees at this date will be maturing their fruit and will need encouragement in the way of manures and, if possible, some extra warmth at the roots. This latter, unless provided by hot-water pipes and the pots plunged, may be given with leaves and manure, and if the warmth is supplied by fermenting materials the heat should be of a steady nature. The plants should be close to the glass, and with fruits in what may be termed the stationary stage or forming the seeds previous to the final swelling, it is well to prevent a check of any kind. Give tepid liquid manure and also a surface-dressing of some good fertiliser. The roots of vigorous plants will push out into the warm bed, this assisting in finishing the fruits. More attention must be paid to moisture overhead, as if the house is at all moist less syringing will suffice. Excess will cause rust, this disfiguring the fruit and foliage and stopping swelling. Syringing overhead as the fruits approach the final swelling should cease, and even in the case of those less advanced the foliage

should be dry by sunset. Stopping the new shoots is important with these early fruiting trees, as if allowed free growth the first fruits will cease to swell. The young shoots of this season's growth should now be stopped when 6 inches or 8 inches long, and all root or sucker growth removed as early as possible. The temperature for fruiting plants in pots may be 65° or 70° by day, allowing the thermometer to run up freely with sun heat, with 60° at night or 65° in mild weather. Plants struck last year and in small pots should not be kept back, as such potted on now into 10-inch pots will make nice stuff for forcing next year. Pot firmly and give ample drainage. Use good turfy or rough loam, a small quantity of bone meal and mortar rubble, and leave plenty of space on the surface for watering and mulching. Avoid crowding the leading shoots, and if possible train the plants to a single stem, stopping the shoots before a long growth is made to get well-balanced heads.

**SUCCESSION FIGS PLANTED OUT.**—The trees if started early this month will now be on the move and the fruit pushing out freely. A mulch of warm litter and leaves mixed does much good, as it maintains a genial moist temperature and induces a strong growth. Light and sunshine are important details, as, given these, good fruit in quantity is produced. I name these, as often the wood of trained trees is much crowded, and if not well ripened when started into growth at this season, it dies back. At this date any weakly branches should be removed, and the others regulated before growth is far advanced. Syringing several times daily with tepid water will assist the wood and buds to swell, and a night temperature of 50° may now be given, allowing a rise of 10° by day. Figs are often planted on the back walls of vineries, but in such a position good fruit cannot be expected; indeed, fruit of any kind is out of the question. The trees in this house should be treated in the same way as regards stopping, as advised for the earlier pot plants. It may perhaps be necessary to allow a little more freedom of growth in the laterals. The first crop of fruit is mostly produced near the points of the shoots; whereas the second crop is produced from the axils of the leaves on this year's growth. To obtain the latter it is necessary to stop when about 8 inches long, and the break or growth from these shoots will form next year's fruiting wood. As the trees planted out frequently grow too freely, it is necessary to remove some shoots entirely; I prefer doing this when young to leaving them until the knife must be used. It is an easy matter to rub off useless or weak shoots as they appear. As growth increases, more water at the roots will be necessary. I do not advise mulching till the first fruits are well advanced. If given at that stage it will assist both the first and later crops.

**FIG TREES NOT FORCED.**—Many grow Figs in cool houses and get a splendid crop, with, of course, no second crop. Such trees may now receive attention and the necessary pruning. I have seen Figs a mass of shoots and leaves fruit but sparingly. This is the result of crowding the wood and allowing a free root-run. Both these may now be prevented by removing the useless or long naked branches and giving the shoots more room to develop. Barren trees should be root-pruned and new soil given the roots. In giving new soil make it as firm as possible, and thoroughly saturate the old border if at all dry before making it up.

**THE ORCHARD HOUSE.**—Where a house is devoted to mixed fruits much depends upon the grower's requirements as to starting the trees. The orchard house, if heated—which is a great gain—may be often used for such plants as Chrysanthemums; but these should not be allowed to remain in the house after the middle of the month, as a thorough cleansing is necessary, more so where plants which are infested with mildew are housed. All potting should have been done ere this, but in case there has been delay or new trees purchased, no time should be lost in getting the work done. Such trees should not be forced, but be brought on slowly. The trees, if prepared in

the autumn, will at this date need little pruning of any kind, the best results being obtained from those kept stopped during growth, cutting away the useless wood when potting. Before housing, the drainage should be examined where re-potting was not necessary in the autumn; and should worms have closed the drainage, the evil must be remedied at once. Should clear strong lime water fail to reach them, I would not hesitate to turn the plants carefully out of the pots, replacing without disturbing the ball of roots. After housing, free ventilation should be given for a time, occasionally damping over early in the day in fine bright weather and again at closing time. These remarks apply to such as Cherries, Peaches, or Nectarines. As the trees will be in bloom in about six weeks, it is well to fumigate twice or thrice before the flowers open to destroy greenfly. If the house is heated, a little heat turned on while the trees are in bloom will be of great advantage. If such as Pears or Plums in pots are brought forward in this house they should be brought in before the first trees are in bloom, placed at the cool end, and treated as advised for the earlier trees.

G. WYTHES.

### THE KITCHEN GARDEN.

**FORCING ASPARAGUS.**—Where home-grown roots are depended on, a sufficient quantity to meet the demand may be lifted at regular intervals. In view of frost, it is also a good plan to store a good number of roots in a cool shed or outhouse, and cover with 6 inches of leaf mould or fine soil. Where a spare Cucumber or Melon pit efficiently heated exists, no better place can be selected for bringing on a batch or two. Beds also formed of leaves or leaves and short litter, some 4 feet high at the back and gradually receding towards the front, may be built up for the accommodation of frames. The surface should be covered with 2 inches of rough leaf mould, the roots laid on very thickly together, and finally covered with 4 inches of the same material. No water will be needed at first, and the frames may be matted and thickly covered with litter or bracken, this inducing a quicker growth. As soon as the grass appears, light and air must be admitted in order to produce both colour and flavour. Half-exhausted permanent beds may be lifted piecemeal and forced, a new one being made in its place. In forcing Asparagus nothing need be wasted, as the finer grass may be used in soups. In some large establishments permanent forcing beds exist. These are surrounded with deep brick cavities, and pigeon-holed similarly to old-fashioned Pine and Melon pits. Fermenting material is thrown into these and well trodden, the tops of the beds also being covered with the same material. By having three such beds, each is forced one year and rested two. When in active growth, forced Asparagus is much benefited by one or two applications of liquid manure.

**RHUBARB.**—Apples being unusually scarce this year, the earliest batches of Rhubarb brought on in the Mushroom house will soon become exhausted. Presuming that a second batch of roots was introduced at Christmas, the supply may be kept up by putting a few roots in a warm cellar or similar place, to come on very gradually. The general covering on outdoor beds may now be given, first placing the pots over the crowns, afterwards filling in the intervening spaces with good sound leaves, and allowing a foot or so of covering on the top. The use of hot stable manure is dangerous, as it forces growth unduly and ruins the crowns for future years. If there are a few spare pots they may be stood over odd crowns; this will bring them on a week or ten days in advance of the uncovered roots. The present is a good time to prepare a plot for a new bed, and as Rhubarb must have a good larder, plenty of rich manure should be incorporated in process of trenching. If early sorts are to be planted, the old Prince Albert and Reading Ruby may well be included, the former sort forcing more quickly than most others, Myatt's, Linneus and the

common *Victoria* following each other later in the season.

**MUSHROOMS.** These will now be in great demand. As sharp weather necessitates increased fire-heat care must be taken that the surface of the beds does not become too dry. Rather than allow this, cover with a good thickness of dry oat straw. Hay is unsuitable, as it is apt to get mouldy and makes the beds colder. Covering the beds at all times, even in well-heated structures, is profitable, as it lessens the need for syringing a fertile source of decay and discoloration amongst the young offsets. In gathering always remove the entire stem, as leaving a portion in the soil causes rot to spread. Partly exhausted beds may be well moistened with salt water of moderate strength at a temperature of 90 and then be covered with litter, as advised above. The present time is opportune for making up a good-sized bed for coming into bearing at the end of March and throughout April. If there is no room in the Mushroom house proper, a warm cellar or snug, well-sheltered outhouse with good thick walls will answer. The bed should be of extra thickness, 2 feet being none too much, and an extra thick covering must be given. Such beds will often remain inactive for a considerable time, and spring into fertility with longer days and increased sun heat. In firing, rather allow for a slight fall in the temperature than overheat the pipes, as if the beds are in good heart, Mushrooms will appear even if a little later, and they will remain productive over their normal time.

**SEAKALE.**—Where a good breadth of crowns in the open beds was not covered with bracken or litter before the frost came, difficulty will have been experienced in getting the roots out of the ground. Not only should protection be given by the end of November at least, but an occasional batch of crowns should be lifted and bedded in the root shed for convenience. In the space devoted to Seakale in the Mushroom house it is a good plan to have three divisions, so that when a batch is cut for the table it can immediately be replaced, another lot being almost ready for the knife, and a third just on the move. Rather than allow the Kale—when ready to remain in the warmth—to become drawn and watery, cut it and remove it to a cool, not too cold place, and stand it in a pan or shallow basket containing damp moss. This is far better than water for keeping both Seakale and French Beans. Save all good, sound, thong roots, cutting them into 6-inch lengths, and embedding them in sharp soil to callus.

**PREPARING FOR EARLY POTATOES.**—On light workable soils and in fairly warm situations, sheltered borders may now be got ready for the earliest Potatoes. I do not advise the use of solid spit manure, as, independent of its tendency to induce more haulm than tubers, it becomes saturated, and by keeping the soil in the vicinity of the roots and tubers cold hinders early and rapid growth. If these borders were manured and cropped last summer with some fairly impoverishing vegetable, no further stimulant will be needed for these short topped early Potatoes. but it is a good plan to dig in a fair quantity of leafy hotbed refuse—the sweepings of pleasure ground walks, wood ashes, and similar opening materials previously well mixed, these acting as a filter and increasing root warmth. In cases where the soil is at all retentive, digging is best postponed till a week before actual planting, as by opening the surface wet ground becomes wetter, and the crop suffers proportionately.

**CARROT GROUND.**—The preparation of the ground for all first sowings must be pushed forward vigorously whenever weather permits. Carrots prefer a rooting medium the reverse of rich. The lightest, deepest plots should be selected, except for the shortest Horn section, which will do equally well on a shallower soil. Quarters from which Coleworts and Brussels Sprouts have been cleared should be bastard trenched if two years have elapsed since this was done. It tends further to sweeten and pulverise

the soil, as well as to kill grubs if the top is left in a ridged form instead of being levelled down. In March the advantage of this will be seen by the soil breaking down freely. Gaslime may yet be dug in in moderation where wireworm is troublesome, a sprinkling also of soot and wood ashes being most beneficial. Where the soil is not quite so open and free as could be desired, leafy refuse from spent hotbeds may be worked in as a corrective, such soils when cropped with roots being best manured with some artificial composition sown broadcast in spring. A little sheltered corner should also be prepared for sowing a bed of the earliest Short Horn kinds in March.

**CAULIFLOWER PLANTS.**—Plants in handlights should now be examined, as, generally speaking, the first signs of buttoning can by now be discerned. Where such is the case the plants had better be pulled up and thrown away, the soil being well stirred with a small handfork and the tops placed on. This will allow the surface soil to dry nicely for another batch from frames in February. Plants in pits and frames must also be looked over and all bolting batches pulled up. Wood ashes may be freely distributed amongst Lettuce plants where damp or rot is prevalent and a little dry lime added if slugs are troublesome.

**SALADING.**—In no department is regularity more necessary than in work amongst salads, that is if blanks are to be avoided. If Endive in pits and frames in a sufficiently blanched state is not forthcoming, remove a few dozen heads to the Mushroom house, where a few days will make a marked difference in it. Although Endive must be well protected in sharp weather, abundance of air and complete exposure on sunny days must be the rule, or sad havoc will be made by damp. Small lots of Chicory must be regularly got into warmth and sowings of small salading made every ten days.

J. CRAWFORD.

## GARDEN SKETCHES.

### CHAPTER VII.

“There are days which occur at almost any season of the year, wherein the world reaches its perfection,

When the air, the heavenly bodies, and the earth make

A harmony as if Nature would indulge her offspring.” EMERSON.

**JUNE 6.**—It is the hour of sunset. Peace rests upon the hills and slumbers in the valley. Through the stillness comes the rise and fall, the murmur of the last fringed wave that breaks upon the tranquil shore, while from the distant meadows is heard the call of the Rail. The day has been one of gentle showers, and now the air is warm and fragrant as the last rain-drops melt away. Overhead the clouds are breaking. The thin pearly mist that is rising from the valley has so caught the sun's last rays where the clouds have parted in the western sky, that it seems like a rose veil east over the mountain-side and across the undulating woods with their shadowy distances. The evening has reached the perfection of “leafy June,” for the parching drought is ended, and all Nature is revelling in the longed-for moisture. During the past three months there have been cloudless skies and hot sunshine day after day, that have turned spring into summer and hurried the flowers into bloom long before their wonted time, for in all these months there have been only two or three days which brought with them reviving showers. To-day the tide of bloom seems at its height. It is the time of Poppies, and how supreme is their reign, making each spot to glow with their fiery presence. As they flutter in the morning breeze and the sun's rays come aslant through their shining petals, is there any flower more radiant to behold than these flaming Eastern

Poppies! And when we gaze within, how beautiful are the deep blotches, the dark eyes that look up at us from their crimson depth! How lovely, too, are the soft anthers, shedding their blue-grey dust over the velvety striped capsules. Grown in a mass, these Poppies are so dazzling to the eye, that they need some restful blossoms by their side, and these are found to-day in the cool blue-lavender of the Dalmatian Irises and in the lovely white Paeonies that have fallen among them. The rock garden has eagerly drunk in the moisture, and now at the end of a year all trace of planting is nearly gone. The flowers are spreading as they will, and flowing into each other with the prettiest effect. Each week brings surprises of its own as new flowers open and meet, and produce soft harmonies and symphonies of colour. One may arrange flowers as they will, but Nature has a subtle touch, a magic wand, which changes them to “the unexpected,” so that there is always a charming uncertainty in what fresh beauty the day will bring forth. Over many of the rocks the Cheddar Pink (*Dianthus cæsius*) and other single kinds are now trailing. The Cheddar Pink is simply a cushion of rosy bloom, delightfully fragrant. Other dainty blossoms look like the finest white lace, so delicately are they fringed. These Pinks often perish in a border, while between two pieces of rock over which they can toss they will survive from year to year. The beautiful grey foliage and crimson stems of *Rosa rubra*, with little dots of pink (the small clustered bloom) scattered here and there, are fair to see, while *Love in a Mist* sits beneath, at play among the branches and peeps forth with misty blue eyes from among the grey and pink and crimson sprays. Behind the Rose tree, but higher on the bank, are tall spikes of *Ornithogalum pyramidale*, very pretty in their starry height. The defect of this plant is the withering of its leafage before the blossoms are expanded. A plant of the variegated *Hemerocallis Kwanso* being immediately in front of it, has in this instance concealed the decaying foliage. *Lithospermum prostratum* is making its new growth, so I have just top-dressed it with peaty soil into which the stems are pegged down, as in this way the size of the clump is readily increased. Lime in the soil being most distasteful to this “bit of true blue,” it will only flourish where it is absent, in fibrous loam and peat. A colony of *Echeveria glauca* on a ledge of flat ground close by is now in fine bloom, having passed through the winter unharmed. *Androsace lanuginosa*, planted in full sunshine in a deep fissure, is making good growth. It is wonderful what drought these moisture-loving alpine will bear if only they have depth of soil in which to press downwards through the clink of a rock. In the more shaded and damper side of the rock garden a deep crimson *Mimulus* is surfacing the ground next the great bronzy leaves of the Japan Saxifrage (*Rodgersia podophylla*) whose white wands of blossom wave aloft. Then comes a cool patch like the blue sky itself, the perennial or summer Forget-me-not, with a lush green in its creeping stems, that suggests the verge of a streamlet bank. Yonder is the glowing *Mimulus* with its dazzling vermilion bloom flung over a low projecting rock, behind which its moisture-seeking roots are safe from the mid-day heat. Besides this most brilliant of blossoms, the deep purple *Campanula Portenschlagiana* is very luxuriant with its long trails of bloom hanging over the stones that keep the ground of even temperature. *Saxifraga peltata* is in its glossy bright green stage, stretching out its leaves above the white Flax that is now a sheet of blossom. The various Thymes are spreading

into soft cushions that cover the drier portions of the rockwork. The silver-leaved Thyme, with its pale lilac flowers, is growing by the walk and pressing up against the rock, of which in the distance it seems part, having very much the same hue. In the same manner the red-purple Thyme (*Thymus serpyllum coccineus*) is lying against a rock of deeper stain, while the soft, woolly Thyme (*lanuginosus*) is rambling over a flat surface. The golden-leaved Thyme should be grown for its aromatic perfume, and its bright and cheerful aspect in winter when the other kinds become dim.

JUNE 20.—The sea is asleep this evening. Even the reflection of the far purple headland lies shadowed in the tide. The day has been one of exhausting heat to plant as well as human life, and now one passes along the shore to catch the cooler evening air as the water gently lips the yellow sand. The sun's slant rays have cast a rose light across the sea, save where changeful currents beneath make silvery lines. Slowly a white-plumed seagull wings its homeward way with the sunlight on its breast, while overhead the Swift screams wildly as it cleaves the sky. Refreshed by the cooler air we can now visit the flowers in the pleasant twilight, for there is no real night, no darkness between the sunset and the dawn, for ever toward the north the sky is bright and clear, with token that the sun, not far beneath, is hastening on his way to rise again in splendour. The noble Californian bush Poppy (*Romneya Coulteri*) has just opened its first flower, a milk-white blossom with a boss of golden stamens in the centre. It is against a sunny wall with peat and leaf-mould at its root, and given a copious watering from time to time. The old stems of last year were cut entirely away as soon as the young growth was a few inches high, and the weakest were later on thinned out, so that all left are now strong and full of flower-buds. In the walled garden the old Stocks and Wall-flowers have just been thrown out and replaced by seedlings sown last April. Shady weather is always best for such transplanting, but as no clouds are vouchsafed to us and the work cannot be longer delayed, branches of evergreens have been stuck all through the beds, which give shelter from the burning sun, and when watered all over in the evening retain the moisture in a wonderful manner, and once rain comes they will be ready to rush forward. The replanting of the Daffodils has taken up a good deal of time. After two years they had grown so thick, it was necessary to lift and divide them, and this division has so increased their number, that I have now a good border of Emperor and Empress, Sir Watkin and N. Horfieldi. The soil was deeply dug and the Daffodils given back again to their mother earth—for, after all, is not a child safest in the nursing care of its own mother?—and our keeping of them must be ever that of a foster-parent. Then the beds of the incomparabilis section and the seedlings had also to be lifted and divided until there was no more room for planting, and some had to be given homes under the trees. In the fountain garden the white Martagon Lilies among the red-leaved Lobelias are tall and fair, but fairest of all in the evening hours when the sunbeams shine through their stainless petals, and they seem aglow in the misty light. While English Irises are in flower among the Roses, replacing the now slumbering white Daffodils, white Violas are spreading over the verge.

The Bamboos have made early and rapid growth, some of the new shoots being 12 feet high. No doubt a good soaking of water from the hose every week has supplied their need, which seems a moist root-run beneath and hot

sun overhead. The best time for transplanting appears to be just as the new growth begins to push up. One I moved about six weeks ago never felt the least check, and one could perceive its visible growth from day to day. To have the ground beneath shaded with low growing shrubs, or even large Ferns, is a vast help to their well-being, as it prevents parching of the soil, keeping it cool in summer and warm in winter. Good-sized rocks that the roots can run under will have the same effect, but are not always to be had, or may be unsuitable to the position of the Bamboos. Their feathery wands are certainly most graceful, and, moving gently in the summer breeze, give a delightful sense of coolness. No doubt they will be more largely used when better known, as they are one of the most beautiful additions that has been introduced of late years into our gardens, alike pleasing to the eye in winter as in summer.

On the Periwinkle bank the soft golden blossom of the St. John's Wort (*Hypericum calycinum*) is now replacing the blue of the Violets, and Creeping Jenny (*Lysimachia nummularia*) is trailing down under the old Laurel. A very pretty grouping in the rock garden is made by the lovely blue of *Mertensia sibirica* and the indescribable hue of *Mimulus glutinosus*. The fresh blooms of the latter open almost red, and pass through paler shades till they fade into faint orange or sunset glow of amber. A mass of their flowers seen together in all their different tints, with the sunshine at play among them, is a morning glory; but now, in the still hours of evening, they have a beauty all their own beside the cool *Mertensia* in its blue and silver robe.

L. A. L.

(To be continued.)

**Cupressus nutkaensis lutea.**—This is a remarkably distinct form of what in gardens is better known under the older name of *Thujopsis borealis*. The type as a town or suburban shrub is one of the most reliable. Of this I know of an example fully 20 feet in height, the position an exposed one. The variety now noted possesses all the good qualities of the type. Whilst taking into consideration its bright yellow tints in a young state, it should prove a most valuable plant, distinct in every way from both the golden forms of *C. Lawsoniana* and of *Retinospora obtusa aurea*. G.

BOOKS.

THE LIFE AND CORRESPONDENCE OF WILLIAM BUCKLAND.\*

THE place of geology in science is now so firmly established, that it is difficult to understand the almost savage antagonism with which its professors were greeted at the beginning of the present century. We welcome this book. Dean Buckland is certainly one of the most interesting personalities in the field of natural science that the present century has produced—one who, in the words of Professor Boyd Dawkins, "brought about a revival of natural science analogous to the movement in religious thought brought about by Newman and the Oriel school." But what will probably recommend the subject of this memoir most to readers of the book is the kindly, humorous, truth-loving, lovable nature which is there displayed. Buckland was an enthusiast for his science, and he had in a remarkable degree the knack of communicating his enthusiasm to others in a day when the votaries of this science were

\* "The Life and Correspondence of William Buckland, D.D., F.R.S., sometime Dean of Westminster, twice President of the Geological Society and first President of the British Association." By his Daughter (Mrs. Gordon). John Murray, Albemarle Street.

looked upon as scarcely sane. Geology he regarded as the handmaid of religion and as holding the keys of one of the kingdoms of Nature. How he went about his geological researches and of the influence he exercised over the minds of his generation let Mrs. Gordon tell. The book abounds with bright and humorous anecdotes, and there is not a dull page from cover to cover.

PRACTICAL FORESTRY.\*

IN general get-up this resembles Dr. Schlich's book on the same subject, and this, taken in connection with something in the preface, caused one to turn instinctively to Dr. Schlich's volume, at which a ten minutes' cursory glance showed that the resemblance did not end with the outside—although readers are clearly expected to believe that the author of "Practical Forestry" is indebted to nobody but himself. Two societies are conspicuously thanked "for the privilege of allowing the author to make extracts from several of his own prize essays." Not a word of acknowledgment to anyone else. No one, I believe, has attempted to deal with the subject of forestry in a general way without having to acknowledge assistance, and the following parallel columns show how far Mr. Webster's book is free from obligations of that kind:—

"WEBSTER'S PRACTICAL FORESTRY."

Thinning Plantations.

1. At what age should thinning be commenced?  
2 & 4. To what extent should thinning be engaged in? What trees should be removed?

3. What time should elapse between each thinning?

No thinning of young trees should take place until a complete leaf canopy has been established, and it is most important for the welfare of the plantation that a complete overhead foliage covering be brought about as early a date as possible after planting.

At a short period after a complete leaf canopy has been established, the individual trees begin to press against each other, and later on a struggle for existence commences, the stronger specimens gaining the supremacy over the weaker.

Hard-wooded trees require proportionately more space for development than conifers, and the annual rings in the timber of the latter should be narrow in proportion to those of the former, good quality of hard-wooded timber being indicated by broad annual rings, but with conifers the reverse is the case.

Neither your space nor my time permits, at present, of further search for examples like the above; but those acquainted with its author's former writings know how long it is since he began to imbibe Continental principles in forestry, and this last production of his pen may be said to have reached the saturation point. The above extracts from Dr. Schlich are peculiarly his own, and are, I believe, to be found nowhere else; and the parallels from Mr. Webster's book are all to be found within the compass of two or three pages of his chapter on thinning—perhaps the most important in the book. In both cases I have slightly abridged the quotations, but not in any way affected the sense or comparison. I am tempted to compare also Mr. Webster's opening chapter

"SCHLICH'S MANUAL OF FORESTRY."

Thinning.

1. At what age of a wood should thinning commence?  
2. To what trees should they extend? How heavy should the thinnings be?

3. After what intervals should they be repeated?

One of the most important objects in the formation of a wood is to stock the area sufficiently, so that a complete overhead may be established as early as possible. This is desirable for a proper development of the trees. In order to ensure quick closing overhead it is necessary to bring on to the ground a much larger number of plants than can find room for any prolonged period.

Soon after a complete leaf canopy has been established the trees commence pressing one against the other, there is not enough growing space for all, and then a struggle for existence sets in. A portion of the trees outgrow the rest and they rear their heads up to the full enjoyment of the light, &c.

In the case of those broad-leaved species which have the pores in the spring portion of the wood, broad rings indicate high quality, and narrow rings low quality; here heavy thinnings are indicated. In conifers, however, the matter is exactly the reverse.

\* "Practical Forestry" By A. D. Webster. Second edit. Wm. Kider and Son.

on pruning with Dr. Schlich's on the same subject. Suffice it to say that the chapters on pruning in both books are marvels of unanimity.

Mr. Webster has embodied in the book some drawings that were originally contributed to THE GARDEN by Sir Herbert Maxwell in 1876, and has transferred them (very rudely engraved by some inferior process) to his own pages without any acknowledgment of their origin. J. S. W.

#### ARRANGING CUT FLOWERS.

IN the engraving here given, Fuchsias, Passion Flowers, Coleuses, and Maiden-hair Ferns are used with good effect, because each is set out in a bold and informal way. The Fuchsia is a delightful flower for cutting, when its graceful trusses of bloom are well arranged and not hidden with other things. The flowering shoots bend over gracefully, and the dark-leaved Coleus is in bold contrast, whilst the Passion Flower at the base is shown to advantage. The aim in all forms of decoration such as this should be to create an informal and graceful effect, which is not done by cramming the flowers together in a way to deprive them of light and shade, and hide their individual beauty.

**Colour in Ivies.**—The variegated Ivies lose their beauty and become unattractive if not favoured with plenty of light and a maximum of sun. I have a high wall which viewed from one aspect was deemed unsightly. Eventually the wall was covered with a choice assortment of golden and silver Ivies. For a few years the colours remained fairly true, but suddenly the majority of them assumed an ordinary greenish tinge, and although serving the purpose of a screen to the bricks and mortar, have now quite lost their attractiveness.—J. C.

#### ORCHARD AND FRUIT GARDEN.

##### FRUIT PROSPECTS FOR 1895.

THE very dull, sunless season of last year, more especially during the autumn, caused many fruit growers some anxiety as to the proper ripening of the wood, and also whether the buds would be properly developed. Present appearances indicate that no trouble need be anticipated on those points, as fruit trees of all descriptions are full of promise, and unless we have an extremely unfavourable season, good crops of fruit should be the rule this year. I think the copious rainfall since September last, combined with the very mild weather, has been a great boon to fruit growers, as the buds swelled up to a large size very late in the autumn. A few varieties of Apples, including about one hundred Cox's Orange Pippin, had very small buds early in October, but by the end of the year they had attained the normal size. The same also applies to a few sorts of Pears, but which are now all that could be desired. A feature amongst Apples and Pears that have always been very shy bloomers is that this year they are covered with bold fruit buds, and out of a very large collection every tree of all varieties has plenty of fruit buds. Many of these trees last year had heavy crops of fruit, and I believe that the promise to repeat the same this season arises from being supplied with ample food, thus preventing any exhaustion in perfecting the fruit. Plums of all sorts, both on walls and in the open, are more thickly studded with bloom buds than I ever saw them. Angelina Burdett and Reine Claude de Bayay are covered with buds

this year, this having never happened here before. Apricots, Peaches, and Nectarines are all full of promise, with apparently well ripened wood, on which are fine, bold buds. Cherries, again, both sweet and Morello, look remarkably well. Nearly all the gardens that I have visited this winter have equally as good a prospect as we have, and Nature having done so much towards a bountiful fruit year, we on our part should do all we can to aid her efforts. I think if the question were asked, Do we assist Nature, collectively, as much as we ought to do in fruit-growing? the answer in many instances would be in the negative. In the first place, we might

aphis are in more or less evidence in all the gardens I have seen, and in some gardens the attack will be very violent. If this scourge can be reduced early, we not only do much towards ensuring a crop, but also save anxiety and worry. Unfortunately, I have yet to find a safe insecticide that will destroy the eggs of the winter moth, but the two other foes named can in a great measure be rendered incapable in the egg stage by an application of 1 lb. of crude potash and 1 lb. of caustic soda dissolved in ten gallons of hot water and applied warm to the trees in a fine spray. If this solution is put on at the end of February, moistening every part of the



Cut Fuchsias, Coleus, and Passion Flowers.

with great advantage to the trees and ourselves do infinitely more towards the prevention of insect attacks. As I mentioned in THE GARDEN last year, we commence too late in the spring to deal with these foes successfully. For a number of years I began spraying the trees in March, but for the past two years I have performed that operation at the end of February, with the most gratifying results, and as a proof of its value I may state that on about 1000 Plum trees last year we had neither aphis nor other insect pests all through the year. This spring we may expect plenty of these enemies. The eggs of the winter moth (*Psylla mali*) and

quantities of eggs will fail to hatch.

The extra manuring of trees that are likely to bloom abundantly is a great aid and will cause trees to set heavy crops; whereas if not thus treated liberally the strain of producing such a mass of flowers would in many cases be so exhausting that a failure might be expected. Where a comparatively small number of dwarf and wall trees is grown, the thinning of the fruit-buds exercises a wonderful influence, not only on the setting of the fruit, but also on the swelling and size of the same. When I first took charge here there were some Marie Louise,

Louise Bonne of Jersey and Beurré Hardy Pear trees that always bloomed most profusely, but failed to set any fruit. By removing two-thirds of the fruit buds I have succeeded in obtaining good crops of fruit annually ever since, proving that the efforts of production were beyond the strength of the trees. W. G. C.

**Pear Baronne de Mello.**—Until this season I have never had an opportunity of tasting this Pear, although several correspondents have spoken well of it in the pages of THE GARDEN. My tree of this variety is grown as an espalier, and in former years the fruit, though plentifully produced, was always cracked and deformed. The great heat of 1893, however, ripened the wood, and this season the fruit was not only passable in appearance—being not unlike Beurré de Capiamont, with its russet skin—but the flavour was really good. One of the best points about this Pear is its long-keeping qualities. In midland and northern districts it no doubt requires a wall, and it deserves it even in the south, as good keeping Pears of high quality are none too plentiful. —J. C., *Coddington Hall, Newark.*

**American versus English Apples.**—A short time ago a large importer of American Apples sent me a hamper of carefully selected fruits, also some from the Dominion, asking my opinion of them as compared with English fruit. One Apple of each popular variety was sent, and so far as appearance went they were all that could be desired, but with the exception of Newtown Pippin the flavour was decidedly inferior to good English Apples. In justice to Newtown Pippin it must be stated that it was of excellent quality, only slightly behind Cox's Orange, Ribston Pippin, and one or two other highly flavoured varieties grown in this country. In spite of its excellence, however, the sender stated in his letter that annually the demand declined for it, as the appearance is not so striking as that of Northern Spy, Baldwin, and others with a rich colour, but of poorer quality. Another noticeable feature was the great superiority of the Canadian Apples over those from the States, particularly in the crispness and greater quantity of juice. On other occasions I have received similar specimens, which only confirm me in the opinion that even in bad seasons our English Apples are superior to any in the world when well grown, and it is greatly to our discredit that such immense imports of admittedly inferior Apples reach this country. The Australian and Continental consignments are at present comparatively small, but likely to be increased in the near future unless our home growers not only improve existing orchards, but also extend or form new ones on the best and most approved lines. Unfortunately, Cox's Orange Pippin will not succeed everywhere, but where it does well it ought to be extensively planted, as it is always in demand. The lowest price I ever got for this variety was 30s. per cwt., and this winter the grower could have quoted his own price for good samples. Several fruiterers and others wrote me they would pay any price in reason for it, thus testifying in the strongest manner to its superiority over all others, whether American or otherwise.—W. G. C.

**Paradise v. Crab.**—Until we shall have learned how to work up quickly a healthy young stock of our best Apples on their own roots the question of suitable stocks will be ever with us. A side light on this question which may be familiar to many, but which, I confess, was new to me, came out in a chat with a nurseryman a short time ago. While looking round the nursery, which is fairly large and representative, I happened to ask why it was that so few of the young Apple trees were worked on the Paradise and so few of the Pears on the Quince? The answer I got was that it was simply a question of £s. d., and I was taken to a plot where trees worked on the Crab and the same varieties worked on the Paradise at the same time were growing side by

side. The difference in appearance was very striking. Those worked on the Crab were quite handsome specimens, which any buyer, who knew nothing of stock influences, would be sure to select, the others being mere pigmies in comparison. The great majority of buyers, who came to see before purchasing, selected the trees which looked strongest, and as these were the most easily and most quickly grown, the nurseryman's business being to sell, the other trees were not pushed. Whether this policy pays best in the end or not is a question for the salesman to decide, but it must be a source of dissatisfaction to the buyer, who generally wants to see his trees fruiting soon after they are planted and not wait year after year anxiously watching for fruit until the trees reach orchard size or, as is more likely, ignorantly hacking at them each winter with the knife with the idea of making them fruitful, thus spoiling the trees and producing nothing but cankered thickets.—J. C. TALLACK, *Livermore Park, Bury St. Edmunds.*

#### GRAPE ROYAL VINEYARD.

I HAVE read Mr. Douglas's interesting remarks on Grapes at page 1, and am pleased to find he has a good opinion of Royal Vineyard. We seldom see or hear anything of this variety now-a-days, the reason, doubtless, being its uncertain setting character. A noted Grape grower in the midlands wrote to me some time ago asking for some eyes of it, as he knew I grew it. When I sent the eyes I enclosed a few berries. He replied that the flavour was grand, but asked if it was really worth growing, being such a bad setter. If, however, this difficulty can be surmounted, as Mr. Douglas says it can by extra care at the setting period, then it is not only worth growing, but quite indispensable where quality is recognised. My first experience with this Grape was in Worcestershire. When I first took charge of the place the Vines were not labelled, and I did not know what this particular rod was. When the bunches came into flower the first season I noticed they were heavily charged with the minute globules of water of which Mr. Douglas speaks, and as I did not give them any special attention, I did not secure a single perfect bunch. The year following I used a rabbit's tail freely each day at noon, thus removing the globules and allowing the pollen to act. Every bunch set like Hamburgs, swelled off fine berries, and ripened well. From that time I have always been partial to Royal Vineyard. The Vine I now have is inarched on Gros Maroc, and the stock seems to suit it capitally. It does not grow quite so strong as when on its own roots, while the water globules which appear are not nearly so numerous. When in bloom I give it a temperature of 68° or 70° at night, keeping a dryish atmosphere during the day and damping down very slightly in the afternoon when sunny. With even ordinary care it sets quite freely and does well throughout. I think the culture of these high-flavoured Grapes is not sufficiently encouraged by societies offering prizes. I would include a class for them in the schedule at every large show.

In referring to Gros Colman, Mr. Douglas says it requires a house to itself to do it properly. This is no doubt true when on its own roots. If inarched on the Muscat it does its work in a surprisingly short time. I have before referred to the Gros Colman at Kelham Hall near here. This is worked on the Muscat stock, and which, started at the beginning of March, regularly ripens its crop by the beginning of September. The bunches are large, the berries enormous and the colour that of the Sloe. After seeing these Grapes I put a graft on to a Muscat rod. The Vine bore a bunch last summer, and although the house was not closed till February 1, the bunch of Gros Colman was quite black by the middle of July.

J. CRAWFORD.

**A good winter Pine.**—Pine-apple culture, although greatly on the decline in English gar-

dens, is, nevertheless, still carried out in many places. It is not always that good sound fruit can be had at mid-winter, as even the old Cayenne and Rothschild are apt to be discoloured in the centre unless grown under the most favourable conditions. Probably, all points considered, Black Jamaica is the best winter fruiting sort, being seldom found with a black centre. Black Prince, however, a variety apparently little known, ripens most satisfactorily during the dull dark months of winter. The fruit is long, sometimes thirteen or fourteen pips deep, rather narrow perhaps, but very symmetrical, and in colour a handsome bronze. The flavour is good, and large fruits are produced on small plants, a rather cramped root room suiting Black Prince best.—J. C.

**Potash for forced Strawberries.**—In many gardens the Strawberry plants for forcing are far from satisfactory, a large proportion of those that were put in early either being blind, or throwing up weak flower-stalks and very small blooms. Amongst the many manures, both natural and artificial, now to be had, I think muriate of potash is one of the most useful for Strawberries in pots, as, while not producing a gross habit, it seems to cause a great increase in the strength and general good health of the plants, and materially assists the development of the fruit. Unlike some manures, there is no objectionable smell, and if applied while the fruit is ripening it does not affect the flavour; in fact, I believe it improves it rather than injures it. As muriate of potash is a powerful salt, somewhat weak applications will prove far more beneficial than strong ones. A very fair solution is half an ounce dissolved in one gallon of water. This may be given two or three times a week, and if deemed advisable may also be supplied, in addition to any diluted natural manures. The value of the muriate of potash would perhaps not be so marked on plants potted in a heavy soil, but for those in a medium or light soil its effects are very apparent, and will warrant its use in the future. Another advantage that I think arises from employing this salt is that it keeps the soil sweet. When the fruit has attained half its size an application of nitrate of soda, one ounce to each gallon of water, will afford a welcome change in the food and help the development of the berries; but according to my experience any further waterings with nitrate of soda have a tendency to interfere with the flavour when the berries are ripe.—W. G. C.

#### STOVE AND GREENHOUSE.

##### LIVING EDGINGS FOR CONSERVATORY STAGES.

THE time is now quite opportune to draw attention to this subject, on which not nearly enough thoughtfulness is, as a rule, bestowed. It cannot be argued against the adoption of living edgings that they are not easily kept, or that the choice of material is in any way limited, or even that the propagation of the most suitable varieties is in any sense a difficult matter. Hence, where advantage of this additional feature is not taken it must be assigned to other causes. Of their utility and effectiveness there can be no doubt whatever where once they have been adopted in a judicious manner. Hardly two cases may be exactly alike as to the special needs in this case. Once I had charge of a large conservatory with the borders planted out. In this instance I used a marginal edging of *Selaginella denticulata*. Dotted amongst such a growth either Snowdrops or Crocuses were very effective in the spring, these being lifted after flowering, when the *Selaginella* was taken up and relaid. To attempt to keep this kind of edging for two seasons will not prove satisfactory. Palms, Ferns and other fine-foliated plants

formed the chief features in the beds in question, shade during the summer being given. In dealing with plants needing less shade, as Camellias, Rhododendrons, &c., *Ficus repens* would answer well; this would not require renewal every spring. In a light, sunny house the new race of hybrid *Streptocarpus* can scarcely be beaten. At Kew these are used with the best effect in the succulent house. The foregoing are all suitable for cool or average conservatories, but for warm conservatories the subject of the accompanying illustration makes one of the most effective of edging plants either planted out or in pots. It will thrive well either in the sun or when shade, the tinted growth in the former instance being very attractive, whilst the purity of the variegation is equally so in the latter. It is also well suited to ferneries that are not excessively moist.

The foregoing are almost entirely cases of planted-out "edgings," but in pots they still form most suitable subjects for hiding the pots (not always clean ones) of other plants from view. Wherever the side stages are of sufficient width such edgings should be adopted, whilst central stages need never be overlooked, the effect of such edgings adding greatly to the general appearance. Edgings to stages need not be of compact, close growth; nay, rather it is better to have them selected from material that will during the season droop down, adding still further to the effect as a whole. *Panicum variegatum* (I much prefer this, its older name if not its strictly correct one) is an apt illustration of this method for a moderately warm house at any season or for the average conservatory during the warmer months. Imagine, for instance, this pretty Grass intermixed with *Lobelia gracilis* (a sadly neglected plant because not of compact or prim growth). What could form a prettier combination, the shades of blue and white of the *Lobelia* and the silvery variegation of the *Panicum*? The common Musk is another instance; so also is the Giant Musk, but of the two, for pots, I prefer the former. The varieties of the *Tradescantia* that are given at least the warmth of the average stove during the winter will at other seasons serve admirably as edgings in any place where the *Panicum* can be safely used.

Turning to plants that require the warmth of the stove, attention is at once arrested by the effect produced by the use of *Fittonia argyoneura* either in moist positions or comparatively dry ones. As a contrast to this plant, *F. Pearcei* could be suitably employed, or, better still perhaps in some cases, *Cyrtodeira fulgida* or *C. metallica*. Both of these last-named plants are charming subjects either as edgings or for a carpeting amongst taller ones; their brilliant Tydaea-like flowers are very showy. Another good old stove plant for an edging is found in *Torenia asiatica*.

For the very coolest houses, even where the frost is barely or even not excluded, there are *Enonymus radicans variegatus*, one of the prettiest of all edging plants, and *Dactylis glomerata variegata*, also *Eurya latifolia variegata*. As a pot plant the last-named is a specially good edging for decorative groups in other than the growing quarters. The smaller and dwarf-growing *Begonias* of the variegated or Rex section should not be passed over. They seem to be equally as much at home in a house from which the frost is barely excluded as they are in warmer quarters. Ferns, again, can be used to the best advantage as edgings, choosing those of dwarf habit. *Adiantum cuneatum* (of which too much is hardly ever grown), *Pteris serrulata* (better for this purpose than its crested forms),

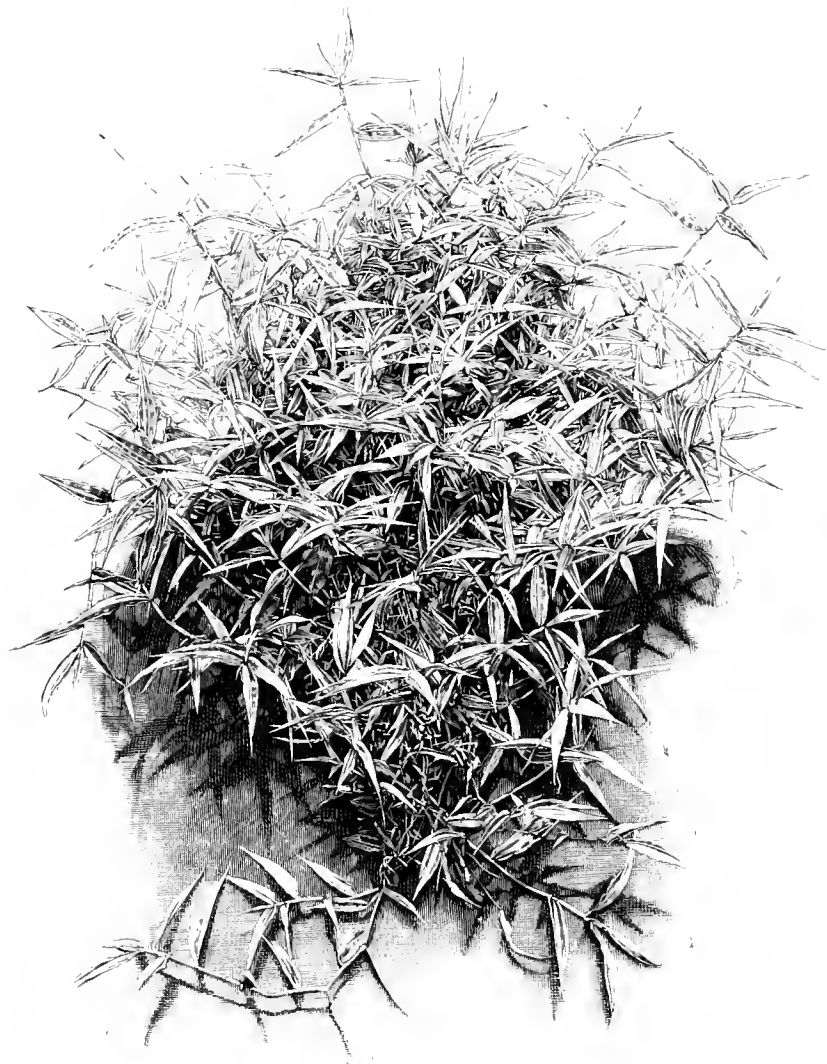
and the dwarf *Davallias* are cases in point. It would have been possible to extend this list, but sufficient has been quoted under each head. Additions can be made as the circumstances may require.

GROWER.

#### BEGONIA GLOIRE DE SCEAUX.

WINTER-FLOWERING *Begonias* have attracted a good deal of attention within the last few years, and consequently many have been brought forward during that time. Some have proved exceedingly valuable for blooming in the winter, and among the best is *Gloire de Sceaux*, which was first distributed about ten years ago, but was not generally known till a number of plants in grand con-

commences to bloom about mid-winter, and a succession is kept up till spring is well advanced. I have also noticed that this *Begonia* seems to be less affected by fogs than many of its class are. Another variety with more pointed leaves of a bronzy crimson colour is *President de Boureuilles*, worth growing for its foliage alone, but the pink flowers are also very showy. A continuous flowering variety of great value for winter blooming is *Gloire de Lorraine*, one of the productions of that eminent raiser, M. Lemoine, of Nancy. When distributed it was announced as a hybrid between *Begonia socotrana* and *B. Dregei*. The flowers, which are profusely borne, are deep rose in colour. In general appearance it is somewhat like Messrs. Veitch's first hybrid of this class—*John Heal*, but the blooms are not so brightly



*Panicum variegatum.*

dition were shown at a meeting of the R.H.S. in the middle of January two years since by Mr. Jennings, gardener to Mr. Leopold de Rothschild, Ascott, Leighton Buzzard, when a first-class certificate was awarded it. Since then it has made headway, and is, I should say, destined to retain that popularity for a long time. It was raised by MM. Thibaut et Keteleer, of Sceaux, near Paris, and described as a hybrid between *B. socotrana* and *B. subpeltata*. The habit of the plant is stout and vigorous, and it forms a neat, compact, pyramidal-shaped specimen, plentifully furnished with bold foliage of a rich bronzy green tint. The flowers are large, borne in good sized clusters, and of a deep pink colour. It usually

coloured. *B. Gloire de Lorraine* will often flower from autumn till the spring. Lastly, among the best of all the winter flowering *Begonias* are those Chelsea hybrids, *John Heal*, just mentioned, *Adonis*, and *Winter Gem*. Of these the variety *John Heal* resulted from the intercrossing of *B. socotrana* and a summer-flowering tuberous-rooted variety—*Viscountess Doneraile*. *B. John Heal* has bright rosy-carmine coloured flowers, which retain their freshness for a considerable time. *B. Adonis* was obtained by crossing *B. John Heal* with a tuberous-rooted variety. The flowers of *Adonis* are carmine, shaded scarlet. The most recent of the three is *Winter Gem*, a hybrid between *B. socotrana* and a crimson-scarlet



tuberous-rooted variety. *Begonia Winter Gem* is perhaps the most useful of the three, its scarlet-crimson flowers being borne in great profusion, so that it is a striking object throughout the winter months. It will be seen from the above that we are greatly indebted to *B. socotrana* for some of our finest winter-flowering *Begonias*. It was the subject of a coloured plate in *THE GARDEN*, March 11, 1882, and at the time great expectations were formed of its value to the hybridist, which expectations have now been fully realised. *B. socotrana* itself is well worth growing for the sake of its blossoms, which are borne during autumn and early winter. H. P.

**Kentias.**—Some years ago, when Palms in small pots first became popular for indoor decoration, and were then largely taken in hand by a few of our market growers, the principal kinds grown were *Latania borbonica*, *Areca lutescens*, *Corypha australis* and *Scaevola elegans*. Time has, however, changed all that, and now the *Kentias*, particularly two species—*K. Belmoreana* and *K. Fosteriana*—are grown in far greater numbers than any other Palm. Of these, *K. Echinoreana* is the dwarfier and more finely divided, *K. Fosteriana* being taller, with the segments of the leaves much broader. Good established plants of *Kentias* that have been inured to a greenhouse temperature will remain in good health in a room for years, provided frost is excluded therefrom and the plants receive a reasonable amount of attention. Irregular watering and an accumulation of dirt on the foliage are two of the most important reasons that cause plants in dwelling-houses to become unhealthy. These Palms will succeed in much smaller pots than many suppose; indeed, they will stand for years without repotting, and when the pots are full of roots an excess of water will rarely harm them; whereas, with a quantity of soil into which the roots have not yet entered the result will be totally different. In some market nurseries these two Palms are grown in such enormous numbers, that it is difficult to imagine what becomes of them all. These *Kentias* as indoor plants enjoy, I should say, at the present time a popularity only second to that universal favourite, the *Aspidistra*, which will not only exist, but actually thrive even in some of the most densely populated districts of London.—H. P.

**Forced Azalea mollis.**—This *Azalea* is so readily forced prematurely into bloom, that vast numbers are every year so treated, and during the autumn specially prepared plants bristling with flower buds are sent here from the Continent in large quantities. One very important point in connection with these *Azaleas*, and one that is too often overlooked, is that no time whatever should be lost in potting those that are needed for forcing, as the flowers on established plants retain their beauty for a much longer period than those produced by plants that are just potted and taken into the forcing house. This same remark will apply to all shrubs intended for forcing, but in few of them is the difference between established and non-established plants so pronounced as it is in this *Azalea*. In the case of those that are just potted, the blooms, generally speaking, open readily enough, but many of them soon drop; whereas the others remain a much longer time in perfection. Hence some prefer to keep these *Azaleas* intended for early flowering altogether in pots, and if a reasonable amount of attention is given them when out of bloom this arrangement will prove satisfactory. The leaves produced under glass are very delicate; hence the plants should be protected after their beauty is over until the season is sufficiently advanced to turn them out of doors. They may be plunged outside, when the principal point to be observed is to see that they do not suffer from want of water during the summer. After being forced for a season or two it will be found that as they make their growth earlier than those in the open ground their buds are sooner formed; hence early forcing is an easy matter. This feature is especially noticeable in

the case of other *Azaleas*, viz., the different varieties of the Indian section, and also in the little purple-flowered *A. amona*, which can easily be had in bloom before Christmas.—T.

#### THE WEATHER OF 1893 AND ITS EFFECTS ON THE GARDEN.\*

It will be most convenient to take the twelve months from November 1, 1892, to November 1, 1893, and a short record of the weather of each month will help us to gauge the weather of the year accurately. You will remember that the autumn of 1892 was fairly mild. In November there were five days on which the thermometer was below 32°, but the frosts were very slight. In December there were sixteen such days, but the frosts were very slight, so that the mean minimum for the whole month was only 32°, yet in the last week the frosts were severe, and on the 27th the extreme minimum of the year was reached, the thermometer going down to 17°. From that time for nearly three weeks there were almost continual frosts, and there were fourteen days of frost in January, with little wind and almost no snow. The rainfall of January was a little over 2 inches, and at the end of the month the thermometer was up to 52°. In February there were four days of slight frost, but there was over 3 inches of rain, and the thermometer reached 57°, and the month might be called almost favourable throughout. Then began the bright fine weather which lasted so long. March was fair all through with slight frosts on three days, with the thermometer reaching 65° and only four-tenths of an inch of rain, though rain was recorded on eight days. In April there were two slight frosts—the last of the season; the month was bright all through, the thermometer reaching 79°, and the rainfall only .06 inch, which fell in one day. May was almost equally fine, but not quite; the thermometer reached 77°, and there was a rainfall of 1.7 inches, spread over six days. June was a splendid month, though rain was recorded on eleven days; the thermometer reached 87°, and there was 1 inch of rain. In July there were a few wet days in the middle of the month, and rain altogether on fifteen days, making a rainfall of 4.3 inches, but on the whole it was a fine month with the thermometer reaching 83°. August also was a beautiful month, with 1.7 inches of rain spread over ten days, and the thermometer reaching 86°. September was equally fine, with 1.4 inches of rain spread over fourteen days, the thermometer reaching 77°. In October the weather began to change; it was on the whole a bright month, the thermometer reaching 69°, but there were 3.4 inches of rain, much needed, and on the two last days of the month there were frosts, and the glory of the garden was at an end for the year. The outcome of the year was this: Nearly seven months of bright sunny weather with very slight intervals of rain; a warm, but not an oppressive summer, with very little dew at night and almost no thunderstorms, and bright blue skies and clear atmosphere throughout. The only summer with which we can at all compare it was the summer of the Jubilee year, but that was in many respects very different. In that year there were three beautiful months of true summer, with very little rain; but it did not begin till the middle of June, and was preceded by a dull and wet spring, and that entirely altered the condi-

\* Portion of a paper read by the Rev. Canon Ellacombe, M.A., December 13, 1893, and taken from the published transactions of the Bath Natural History and Antiquarian Club.

tions, and so produced very different effects in the garden. The effects of the long summer in gardens this year were very remarkable, and in speaking of them I shall confine myself as much as possible to my own garden, and so speaking from personal observations shall be able to speak with more certainty.

The results were not altogether good, and it will be better to clear away first the bad side of the account. It has been a most disastrous year to all newly-planted things, and especially to newly-planted trees and shrubs. Many of them promised well for a time, but they could not stand the prolonged drought before they had got a good grip of the ground to enable them to draw their necessary supplies from the soil. For many plants, but especially for newly-planted ones, no amount of watering will supply what is wanted, and that is a moist atmosphere, especially at night. It was also a very disastrous year to plants which had been long established, but had been weakened by previous bad seasons, and were straggling back into strong life. For you will remember that the two previous winters had been very severe; and when you think of the hard frosts of December and January last, it is easy to understand that the constitutions of many plants had been sorely tried. Still many were not killed, and would have been able to make a successful struggle for life if there had been a mild and dripping spring; but they could not fight against the long continuance of bright suns and a dry atmosphere, and many of them died. That, then, was one item on the wrong side of the account; another was the great abundance and luxuriance of the weeds. The abundance cannot altogether be put down to the bright summer; it arose from the wet autumns of the two previous years, when the destruction of the weeds was almost an impossibility. In that way they had become well established, and then they seemed to revel in the bright sunshine of this year. I will name two particularly. I never saw Dandelions so abundant or so magnificent. I very much admire the Dandelion; in leaf, flower and seed it is one of the most beautiful plants I know, and I often wish it was not such a weed that I might grow it as one of our most brilliant flowers. This year it surpassed itself in brilliancy, and I often stopped to admire the size and depth of colour of the flowers in the hedgerows, and I was not, and indeed never have been, surprised at the praises it has won from some of our best poets, such as Tennyson and Jean Ingelow. The bright sun and still air also produced the beautiful heads of seed in great perfection, and, I am afraid, in too great abundance; and many of you will remember the grand specimens that we gathered in the churchyard of Malmesbury Abbey of its near relation, the wild Salsify. The other weed that was produced this year as abundantly, and even more unpleasantly, was Grass. It is quite remarkable how our flower beds have become almost covered with strong plants of Grass. I am sure that in my own garden there are several borders which would by this time have been quite covered if let alone. This is easily explained. There has been exceeding little lawn-mowing this year. The lawns, like the fields, produced no growing Grass for many weeks, but on the lawns, as in the fields, the Grasses, though very dwarf, went to seed, and the seed was scattered on the borders, which were well warmed and ready to receive them, and there they soon germinated, and produced abundance of plants. The same thing occurred with the large Grasses, the Bamboos, of which I grow several species. They made no growth at all during the hot weather, but as soon as

the drought was over they sent up vigorous shoots, but too late to reach their full growth. I should not have been surprised if some of them had flowered, but I am glad to say they did not, for when a Bamboo flowers it dies.

So much, then, for the bad side of the record; now for the other side. Surely it was a summer of prolonged delight; it was something to record and remember that for six months we could be in our gardens under a cloudless sky almost every day and all day long. That is the general aspect of the summer; but there are many particulars well worth noting, and first we note the flowers. Flowers of all sorts, with some few exceptions, have been most abundant. The one great exception was with the Lilies, which in my garden were dwarf and stunted and very poor in flower. But after making that exception and a very few others, think only what the Roses were; they were in masses, and though the hot sun faded them sooner than usual, they seemed to come again and again. Not only was this the case with the Hybrid Perpetuals, but with the summer Roses as well, and even with the spring Roses, for the Banksian Roses, both white and yellow, were in good flower in October, so that I am sure I could pick Roses from March till the frosts came at the end of October. But there were many flowers which I saw this year almost for the first time. I may mention these few. The *Eulalia zebrina*, which I never saw in flower before out of Devonshire; the *Osmanthus ilicifolius*, the *Asparagus verticillatus* and *A. acutifolius*, the grand *Hibiscus grandiflorus* from the Southern United States, which in former years did not produce even its buds till October and never came to perfection, but this year produced both flowers and seeds; and the Japanese *Bignonia* or *Tecoma grandiflora*, which I never saw in flower out of doors till this year, though it has often formed buds. From these few flowers I pass to

#### THE FRUITS,

meaning by fruits all seed vessels. To me the most interesting was the Japanese Orange (*Citrus trifoliata*). I have had a few small fruit on my tree in previous years, but they did not ripen. This year the tree was covered with blossoms in the spring, and as we had no late frosts I had plenty of beautiful fruit, which fully ripened and produced good seeds. The *Catalpa* had an abundance of fruit like long French Beans; this also fruited in the Jubilee year. The *Cassia marilandica* produced abundance of fruit and good seeds for the first time, which was also the case with *Phygelius capensis*, *Caryopteris mastacanthus*, *Arabis spinosa*, very elegant in fruit, like a delicate Ivy to which it is closely allied; the common Box tree, *Magnolia Lennei* with brilliant scarlet berries, and the fine *Asparagus verticillatus*. Outside my own garden I was pleased to see in the botanic garden in the Victoria Park the curious fruit of the Chinese *Xanthoceras sorbifolia* and the very pretty berries of the *Clerodendron trichotomum*. I have both these in my garden, and I believe older plants than those in the park, but I have never had fruit on them. And it is rather curious to note trees that have not fruited this year. There are no Holly berries, and very few berries on the Thorn trees. I have had no fruit on the Japanese *Diospyros*, or on the Christ's Thorn, though I have had them in other years not so favourable; nor have I had fruit on the *Koelreuteria*, which was covered with its golden pods in the Jubilee year; and Pomegranates in Bath, though they have formed their fruit, have not ripened them. But it is quite certain that this

non-fruited arose not from the peculiarities of this year, but from the weather of last year and perhaps even the year before. The autumnal tints were wonderfully good, and that must chiefly be put down to the bright summer, but partly also to the absence of early autumnal frosts. The late Miss Marianne North told me that of all trees she knew—and she had seen trees in all parts of the world—none could compare in beauty of autumnal tints with the *Salisburia*; but I never realised the truth of this till this year. I have a fine specimen on my lawn, and the autumnal tints came on gradually, a lovely pale gold colour, beginning with the lower branches and slowly spreading to the top, and lasting in their beauty a long time. The autumnal colour of the Tulip Tree is almost as beautiful, but with this curious difference: As long as the leaves are on the trees they are of a fine golden colour, but as soon as they fall they at once become of a dull ugly brown; whereas the leaves of *Salisburia* retain their colour long after they have fallen, and form a golden carpet underneath the tree until they are swept away. I grow a good many species of Vine, and they all showed a wonderful wealth of colour, though their near relatives, the *Ampelopsids*, were not by any means so brilliant as I have often seen them, and the tints of the *Parrotia* were very poor.\* And in connection with the autumnal appearance of the garden, it is worth noting that many people thought that we should have no autumn flowers on account of the early flowering of most of the plants, but the alarm was needless. The gardens this autumn were wonderfully gay; mine certainly was. Most of this, no doubt, was owing to the summer belders, which this year had in many gardens an increased value; but leaving them out of the question, and without entering into details, I can say that my garden in September and October was bright and gay. I rather expected to see an abnormal growth of spring flowers, but it really was very little more than in ordinary years. There were a few Primroses, as there always are; *Triteleia* showed a few flowers, and some of the *Narcissi* are showing their leaves well above ground; but, speaking generally, things are not too forward, but are, in gardener's language, in their right place. But I have one remarkable exception to this. I have had for many years a good plant of *Mandragora autumnalis* from S. Italy and Greece. When I first had it it flowered in the autumn, its normal time of blooming, but year by year it altered its time, and for several years past it has always flowered in the spring. This year—I suppose it thought it was again in the south—it sent up its curious leaves at the end of September, like a gigantic green star lying flat on the ground, and its beautiful flowers have been in great luxuriance all through October and November, and are still in their beauty (Dec. 16).

There are two accidental curiosities which must be entirely put down to the hot summer. One is the reappearance of long-lost plants. I have two such that are worth mentioning. I have good seedlings, not very near together, of some *Cytisus*, now healthy young plants, and yet I cannot call to mind ever having had a *Cytisus* that would produce such seedlings. The other case is much more curious. Many years ago, perhaps twenty or more, I used to grow the pretty little Cape plant, *Bulbine annua*. I am sure it is at least ten or twelve years since I have seen a plant in my garden;

\* Since writing this, the first volume of the "Index Kewensis" has been published, and in it *Ampelopsis* disappears as a genus, and all the species are placed under *Vitis*.

but this year they are in abundance and in many parts of the garden. And what adds to the curiosity is that they have come up in the same way in a friend's garden in the Isle of Wight, and he also cannot call to mind when he last saw the plant in his garden, but he is sure it is many years ago. The other accidental curiosity I would mention is the effect of the summer on our store fruit. Apples are keeping very badly, and in most cases ripened prematurely. Pears and Grapes, too, are ripening badly, and keeping badly. The greengrocers tell me it is the same with Chestnuts, and the further result is that the cider of this year will not keep, and housekeepers are mourning over the premature spoiling of their jams by mould. I suppose in the case of our own fruit, especially Apples, the sugar has been formed too rapidly and fermentation has set in, and this may help us to understand why it is that Apples do so much better in temperate regions than in hot climates. The fruit to be good must mature slowly. But this is only a guess. I do not profess to know all the mysteries of an Apple, or I might be able to explain how it is that the Apple is the hardest fruit tree known, ripening its fruit as far as 64° N.; yet Apple blossoms are more tender than those of the Apricot and Peach.

Leaving the garden, I should like to mention one memorable result of the fine summer. If it has been a great delight to the healthy and strong, it has been an untold delight to the weakly and invalid, and in many cases a prolonging of life and even a renewal of strength. In my own parish I have a remarkable proof of this. The ecclesiastical parish of Bitton has a population of 1200, and in the thirteen months from November 1, 1892, to December 1, 1893, there have been only three deaths, and of those three one was a child of a few weeks, sickly from its birth; another was an older child, who died from the effects of rheumatic fever, but whose life was certainly prolonged for at least three months, and happily prolonged on account of the bright, sunny weather; the third only was a man of full age. When you remember that 17 in 1000 in a year marks a healthy area, you will see something of the effect of a bright summer in reducing even that to 3 in 1200 in thirteen months.

The interesting question now remains, What will be the effect of the long hot summer on the present winter and on the gardens next year? I do not pretend to be a weather prophet, but I do not suppose that the weather that is past has very much effect on the weather to come, yet I am very hopeful that this winter will neither be long nor severe. It is very true that we have had severe frosts, and several of them rather earlier than usual; but an early winter is very seldom a severe or prolonged winter, and the late Sir Robert Christison, a very accurate observer, gave it as his experience for forty years that sharp frost late in October and early in November had been always followed by mild winters.\*

I have little faith in weather cycles, but I have great faith in weather averages, and it would be against all experience to have four severe winters in succession. I call that a severe winter for the garden when there is much

\* A period of from four to seven days of continuous hard frosts in the last week of October or first week in November. In the course of forty years I have not met with one exception to the rule that the frost then ceases and the winter continues open as far on through the winter as the last week of January. My observation does not carry me further.—"Life of Sir Robert Christison," vol. ii, p. 127.

skating, for skating requires a continuous frost and very little snow; and it is a continued frost that works mischief in the garden, especially if there are high winds and no snow. I am sure that a fortnight of cold weather with the thermometer at 25° is more destructive to plant life than two or three nights with the thermometer at 15° or even 10°. Certainly it is so if the ground is fortunately covered with snow during the lower temperature. But all this is literally *in nubibus*, and there we must leave it; but whether the winter is severe or not, it is quite certain that the long, hot summer has added much vital strength to all plants. There was during the autumn a formation in many cases of sappy shoots, which will probably be cut off, even if the winter is mild; but the main life of the plant will be safe, and from all present appearances next year will be a good year for flowers and fruit. We can gather that from the few which show the promise of next year, such as the *Pyrus japonica* and the early *Magnolias*, which are full of flower-buds, the *Hazels*, which are covered with catkins, and the *Pears* and *Peaches*, which are well provided with plump fruit-buds. And I should expect nearly all bulbous plants to flower well next year, for most bulbs rejoice in a good roasting when dormant, and that they have had this year.

And so I bring my paper to a close. Much might be said on the agricultural aspects of the year, but that is outside the limits of this paper. Much also of interest might be said on the effects of the summer on animals, birds, and insects, and some of that I hope will be told us by some other member of the club more competent to do so than I am. My work was limited to the weather and the garden, and on these two points there can be but one conclusion. The year has been indeed an *annus mirabilis*, a year which our children and grand-children will look back to, and when they are grumbling, as they certainly will grumble, at the bad weather of their own day, they will speak with regret of the lovely old-fashioned summer they remember when they were young—a year to be remembered and to be thankful for.

## SOCIETIES AND EXHIBITIONS.

### THE GARDENERS' ROYAL BENEVOLENT INSTITUTION.

#### ANNUAL MEETING.

THE above took place at Simpson's, 101, Strand, on January 17, Mr. H. J. Veitch taking the chair at three o'clock. It was most gratifying to note that continued progress is being made by this old-established and most deserving charity, by which untold benefits have been conferred upon gardeners or their widows (using the definition of gardener in the most comprehensive manner). The increase in the numbers of subscribers during the past year is not large, it is true, but to report any increase at all is most satisfactory at the present time, when many such institutions have to deplore a decreased income. This speaks well for the management, which is not conducted upon any narrow-minded basis, but upon a broad and enlightened view of the whole aspect of the situation. It is surprising that so few gardeners become either annual subscribers or life members. In neglecting this they are certainly standing in their own light. Such matters must not be looked upon in any selfish mood. Some may think that they will never need any assistance from its funds. If so, this is an indication that they have the means at their disposal to assist their more unfortunate brethren, and they ought to render what help they can. Many who have taken this selfish

view have thought they would never require the pension, yet there are such now on the pension list, whilst others are endeavouring to obtain election, but thus far some of these have failed. Even if a gardener should never need the pension, he ought, if he looked at the subject in the proper light, be only too glad to render help to others, not only by his monetary assistance, but by the privilege accorded him in voting for the election of deserving candidates.

It is most satisfactory to know that the last anniversary festival, presided over by Sir Julian Goldsmid, Bart., was a great success. Another very noteworthy advance has been made in the formation of auxiliaries in important centres. Three of these have been started, viz., at Bristol for Bristol and Bath, at Birmingham and at Wolverhampton. This new departure has proved most encouraging, and will be still further extended at other centres. During the past year fifteen pensioners have passed away. The committee, therefore, decided to recommend the addition of fourteen pensioners to those now on the books, eight of whom were elected without the expense and trouble of a contested election, they having fulfilled the conditions of rule iii., 5, to which important proviso attention should be directed. The remaining six were elected on the 17th inst., and the names of the successful candidates given in our last issue. It was with much regret that the committee felt themselves unable to assist a larger number of candidates, the more so as the list of those seeking election is the largest on record in the history of the institution. A perusal of the voting papers last issued will give full particulars of these unsuccessful candidates. With such a long array of applications before them, the committee appeal very earnestly for more support and increased efforts on the part of present subscribers. They specially plead with those for whose benefit the institution was founded to do all they can in urging its claims upon those with whom they come into contact and who are interested in horticultural pursuits. In order to increase the resources of the institution, the trustees, with the full sanction of the committee, decided to sell out the sum of £20,000 2½ Consols and re-invest the same amount in guaranteed securities bearing a higher rate of interest. They have therefore taken up the above amount in London and North-Western Railway and Midland Railway 3 per cent. Debentures, Great India Peninsula 5 per cent. Guaranteed Stock, and Manchester Corporation 3 per cent. Stock. This alone will give an increased income from dividends of about £50 a year. The treasurer of the institution, Mr. Harry J. Veitch, was unanimously re-elected to that important office, and most cordially thanked for his indefatigable efforts to further its interests. The auxiliaries, it should be noted, owe their greatest success to his personal attendance in advocating the benefits of the institution. Mr. G. J. Ingram was re-elected secretary and heartily thanked for past services. During the past year Mr. John Lee, who had for over fifty years taken the warmest interest in the institution, having been for many years the chairman of committee, resigned this important post. In accepting his resignation, the committee desire to place on record the valuable services Mr. Lee has rendered the institution in so many ways. Sir Alexander Arbuthnot, who takes a warm interest in horticulture, was approached, and he very kindly consented to fill the post of chairman in place of Mr. Lee. The annual friendly supper of the supporters of the institution took place at the close of the election, when Mr. George Dickson, of Chester, presided. He urgently appealed to all present to do their utmost in making greater advances in the immediate future, and thus add to the benefits conferred.

**National Chrysanthemum Society.**—A meeting of the general committee of this society was held at Anderton's Hotel, Fleet Street, on Monday last, when Mr. R. Ballantine occupied the chair. The business of the evening was almost

entirely of a purely routine nature in preparation for the annual general meeting of the members on the 25th prox. It was announced that the society's new publication—"The Chrysanthemum Year-Book"—was ready for distribution, and that the demand for it was already being felt. New members were elected, among whom were two foreign members, M. Crozy, of Lyons, and M. Ferdinand Cayeux. The secretary reported that during the year 1894 the following additions had been made: Fifteen affiliated societies, eleven Fellows, and 130 ordinary members. The report of the schedule sub-committee recommending the judges at the society's shows for the season of 1895 was presented.

**Royal Botanic Society of Manchester.**—The council of the above society has resolved to hold a great exhibition of Lilies in the gardens at Old Trafford, to open on the first Monday in August next (Bank Holiday). This being the first special exhibition devoted to the Lily, it is expected that much interest will be excited. It is requested that all interested in this Lily show will communicate with Mr. Bruce Findlay, Royal Botanic Gardens, Manchester.

## NOTES OF THE WEEK.

**Lily of the Valley.**—A charming mass of the Lily of the Valley has been sent us from Mr. Leeton, the Nurseries, Putney Park Lane, Putney, S.W. The plants are tall and most graceful, bearing fine foliage and spikes.

**Bulbocodium vernum** is fully a fortnight earlier in bloom this year than last. It generally is one of the first of the hardy bulbs to come into flower. At this season (when planted in clumps) the purple flowers are very conspicuous, two or three blooms coming from each bulb. It does not require any special treatment. Plant the bulbs during the autumn in a sunny position and let them remain undisturbed for three or four years.

J. W. H., *Warristor*.

**Olearia Haasti.**—For some years I have grown this in large quantities in one of the most elevated positions on the north-east coast. It is quite at home. No shrub here makes so much wood in a year and it never fails to flower freely. I have tried other species of *Olearia*, but none of them will succeed except *macradonta*, which does fairly well. I find *O. Haasti* strikes very readily from cuttings put in at any time during the summer months.—Geo. JOHNSON, *The Gardens, Harriethfield, Scarborough*.

**New plants in France.**—M. J. Sallier fils, Nemilly, France, sends us the following: "I had some fruit of the *Casuarina sumatrana*, and I have sent you a specimen by post, thinking that you would like to see a cone which is so rarely met with in cultivation, and the structure of which is so interesting for its uncommon regularity. As regards new plants, I am sending out in the spring *Rottlera homosa*, a very curious member of the Gesneria family; a yellow-flowered *Myosotis*, M. Traversi (to lovers of these plants a yellow-flowered *Myosotis* is an abomination); and *Euphorbia Fournieri*, a curious plant resembling a *Cereus* with the addition of broad leaves."

**Anemone japonica Honorine Jobert.**—When in the neighbourhood of Belfast in September last I saw a very fine lot of this beautiful autumn-flowering plant in the gardens of Mr. Victor Coates, Rathmore. The plants, which formed the back row in a mixed border in the kitchen garden, were about 4 feet high, nearly as much through, and a perfect mass of bloom. The soil in which they grew was of a clayey nature, and evidently suited them. Planted in this way or in beds the effect is much better than solitary specimens growing at wide intervals in the herbaceous border.—C. R., *Clayton West*.

**Protecting fruit at flower shows.**—When at Newtownards show last August I observed

how carefully the exhibits of fruit, vegetables, and farm produce were protected. As soon as the fruit was judged, a light wooden framework covered with wire netting was placed over it, thus effectually preventing people handling it. The vegetables and farm produce were protected by an upright framework covered with netting, a path being left between the stages and the protectors for the judges to inspect the exhibits. The above system, especially in regard to fruit, might well be adopted at some of the large exhibitions in this country. We should not then hear so many complaints about pilfering.—C. R., *Clayton West*.

**Calanthe bella.**—This charming hybrid Calanthe is now making a very brilliant display in the Victoria and Paradise Nurseries, Upper Holloway, and is useful where cut flowers are in demand. It was raised from *C. Turneri* and *C. Veitchi*, and produces long arching racemes of flowers, which are of a delicate light rose with a camine blotch at the base of the lip. It belongs to the vestita section, and should be given similar treatment to that group.

**Mistletoe.**—I had always understood that the growth of this parasite upon a tree was decidedly pernicious to the host, and there was a report a year or two ago that the French Government had issued an edict that all orchards were to be cleared of Mistletoe on this account, but I see that Mr. Burrell (p. 18) does not take this view. In some parts of Somersetshire it grows—or did so a few years back—on the standard Apples in some old orchards in great profusion. I remember, while staying in that county, seeing a fine bush of it growing on an old *Acacia* tree (*Robinia*) in a rectory garden. I have found it very easy to propagate, splitting the bark of an Apple tree and inserting a seed rarely failing to produce a plant; while four out of five seeds that I merely rubbed on to the bark on the underside of a branch germinated, though more slowly.—S. W. F.

**Lycaste plana and variety.**—This species is useful for winter flowering. It was originally discovered many years ago, and introduced in a living state into this country by the Messrs. Loddiges, of Hackney, about fifty years ago. The flowers, which are borne on scapes about 6 inches or more high, have greenish sepals shaded with brown; the petals white, reflexed and with a crimson blotch in the centre, the small lip being also white, spotted with rosy camine on the front portion. It should be grown at the warmest end of the Odontoglossum house or in a temperature intermediate between that for those plants and the Cattleyas. The variety *L. plana Measurciana* is a rare plant, similar to the typical form, but having olive-brown sepals with light green points, the white petals and lip densely spotted with purplish camine. A fine plant of this is now in flower in the nurseries of Messrs B. S. Williams and Son, of Holloway.

**Lycoris aurea** appears to be a very shy-flowering plant, and possibly the reason for several specimens having come into bloom last year is due to the exceptional heat of 1893 having been favourable to the ripening of the bulbs. Mr. Wallace gives some usual information respecting these bulbs, and suggests that they require warm house treatment. For bulbs imported from Hong Kong doubtless this would apply, but in the case of bulbs from a colder climate, different treatment might be necessary. Some eleven years ago I received some bulbs from the Foochoo hills. The climate was described as very cold in winter, and the soil in which they grew as stones and gravel. These bulbs have flowered but once since their arrival and have been subjected to various kinds of treatment—from hot to cold, from poor soil to rich. Under all the conditions they have grown well and multiplied, but have only flowered once, and that in an intermediate house. One bulb which I gave away a year ago flowered last October, having been grown in a cool frame. Any information on the treatment of these interesting plants would be valuable, as they are a beautiful addition to our gardens, and could they be in-

duced to flower as readily as they increase, they would soon become popular.—BEATRICE DUNCOMBE, *North Deighton Manor, Wetherby*.

**Hardy Cyclamens.**—What beautiful and interesting plants these are. After the snow and frost of the last few days, Cyclamen soon is now commencing to bloom very freely on the shady border, the deep red or crimson flowers, appearing through a carpet of deep green leaves which adds to their beauty, being very attractive at this time of the year. Close to the above are several plants of *C. Atkinsi*, which is also sending up a few white flowers shaded with pink; the petals finely serrated, with a deep maroon blotch at the base of each petal. I find the flowers very useful for small vases, and with a little attention they will keep fresh for eight or ten days. Hardy Cyclamens succeed best when planted on a moist, shady border, in some good loam, peat and sand. They seed very freely, and if the seed be sown as soon as ripe in well-drained pans and not allowed to get dry, it will soon germinate. The seedlings should be ready for planting out in about two years. The autumn-flowering kinds—*C. hederifolium* and the variety *album*—should also be included. The leaves of these autumn kinds are beautifully marked, and after the flowers have disappeared the foliage remains beautiful throughout the winter months.—J. W. H., *Worcester*.

**Bulb boxes.**—Can any reader of THE GARDEN kindly tell me of what wood most of the boxes sent here from Japan containing Lily bulbs are made? It is coarse, the grain runs in various directions, the knots are often very large, and it is evidently that of a conifer—I think perhaps *Cryptomeria japonica*—H. P.

**The weather in West Herts.**—A week of very changeable weather as regards temperature. Both the days and nights remained mild until January 22, when a change to colder conditions suddenly took place. On January 20 the highest reading in the shade was 49°, making this the warmest day of the month as yet, but on January 22 the temperature at no time exceeded 35°. On the following night a thermometer exposed on the surface of the snow showed 23° of frost, which is the lowest reading registered by this instrument during the present winter. The extreme cold lasted but a short time, the lowest point being reached at about ten p.m., the temperature rising rapidly immediately afterwards. At 1 foot deep the soil is now 3° above freezing, or about the average temperature for the previous nine Januaries. Rain or snow has fallen on each of the last twelve days, the total measurement being nearly 2½ inches. Twice during this period the ground has been covered with snow: on January 12 to the depth of 3½ inches, and on January 22 to the depth of 2½ inches, but on both occasions it soon melted. Several winter Aconites in my garden were ready to open before the end of the past year, but, owing to the frozen state of the ground and the dull weather, there was not an expanded flower to be seen until January 20. This is four days earlier than its average date of flowering in the previous six years, but three days later than in 1894.—E. M., *Berkhamsted*.

**Covent Garden Market.**—At Bow Street on January 22 Thomas Frobeck, Charles Champion, William Eames, Henry Lewis, jun., John Grover, William Grove, and Arthur Sole, salesmen, occupying shops in James Street, Covent Garden, appeared before Mr. Lushington, to adjourned summonses charging them with causing an obstruction and inconveniencing the public by allowing vegetables, &c., to stand in the roadway opposite their places of business for a longer time than was necessary for loading or unloading. The prosecution was undertaken on behalf of the Chief Commissioner of Police. Mr. Muir, for the defence, argued that the present practice in James Street had been continued for at least 100 years. This case arose out of a quarrel between the outside and inside men at Covent Garden Market. The inside men had to pay toll to the Duke of Bedford, and they

objected to outside men doing business without paying tolls. There had not been any inconvenience to the public. Several of the defendants were then called to show that the obstruction was not so great as alleged, and that the practice of placing goods on the side of the roadway had been allowed for many years. Mr. Taylor, a vegetable salesman in James Street, said that some years ago he saw Sir Charles Warren, the then Chief Commissioner of Police, with regard to alleged obstructions in that thoroughfare. Sir Charles agreed that the shopkeepers should not be interfered with if their goods were removed from the roadway before 9 o'clock in the morning. Mr. Lushington said it was perfectly clear that any arrangement with regard to James Street entered into by Sir Charles Warren would not in any sense be binding on the Chief Commissioner of the present day. Each defendant would have to pay a fine of 20s. and 10s. costs. Mr. Lushington added that in future cases the full penalty would be imposed.

#### RAINFALL IN 1894. INVERIE GARDENS, INVERNESS-SHIRE.

For year 1894.	Average temperatures.				Total rainfall, inches.	Most rain in one day, inches.	Number of days no rain fell
	Max.	Min.	Wet bulb	Dry bulb			
January	41.15	32.19	38.94	39.2	10.17	1.88	7
February	42.22	34.05	40.14	41.18	14.18	1.08	2
March	51.77	35.21	45.1	50.13	8.05	1.34	13
April	54.58	39.12	51.18	55.25	1.71	.35	16
May	54.91	36.29	48.09	54.00	4.95	1.05	15
June	63.14	48.08	59.25	63.02	5.51	1.20	17
July	67.04	48.24	59.25	66.25	6.90	1.20	10
August	58.29	45.21	56.18	57.27	9.41	1.81	6
September	62.01	39.17	54.08	61.01	7.0	.22	27
October	52.14	26.11	48.08	55.05	3.40	.80	17
November	49.13	41.08	46.03	48.12	14.19	1.35	5
December	43.25	32.18	40.36	42.28	9.74	1.44	5

Total rainfall for the year . . . . . 85.71

—J. HERRIS.

#### TRADE NOTE.

**An effective vaporiser.**—I have tried a great many of the various insecticides that have been brought before the public of late years, and they have by no means given universal satisfaction, some failing to make a clearance of insect pests, or perhaps injuring the plants, while others require a good deal of time and attention. It is now generally admitted that nicotine in the form of vapour is more effective than tobacco smoke, and the best vaporiser I have tried is that known as the "X L all vaporising Fumigator," sold by Mr. G. H. Richards, Lambeth, S.E. It may be used without injury to flower or foliage. I have tried it on show Pelargoniums in flower, on tender Ferns and Orchids in bloom, none of which were in the least injured, while both aphides and thrips were destroyed. The smell afterwards is not in the least displeasing. The whole operation is very simple, the vaporising being effected by a small spirit lamp.—H. P.

#### BOOKS RECEIVED.

"Treatise on the Physiology of Plants." By Dr. Paul Sorauer. Translated by T. E. Weiss, Professor of Botany at the Owens College, Manchester. With 33 illustrations. Longmans, Green and Co., London and New York.

National Chrysanthemum Society's Year-book for 1895.

**Name of fruit.**—*Reader*.—Apple is Rymer.

**Name of plant.**—*Hamilton Leigh*.—A fairly good form, but should like to see a flower when the plant has become established.

**The Wild Garden:** or, the Naturalisation and Natural Grouping of Hardy Exotic Plants, with a chapter on the Garden of British Wild Flowers. Fourth edition, with wood engravings from drawings by Alfred Parsons, revised and enlarged. Long 8vo, limp cloth. Price 12s.; well bound in half morocco, 18s. Through all booksellers.

"This is an Art  
Which does mend Nature; change it rather; but  
THE ART ITSELF IS NATURE."—Shakespeare.

## TREES AND SHRUBS.

### TREES AND SHRUBS CERTIFICATED IN 1894.

THERE is no doubt that within the last few years hardy trees and shrubs have become more popular; hence greater numbers are shown at the meetings of the Royal Horticultural Society, and the list of those upon which first-class certificates or awards of merit have been bestowed shows a corresponding increase. Thus during the year 1894 no less than thirty-two, exclusive of Roses and Tree Peonies, have been so honoured, while in 1893 the number was only twenty-two, and in 1892 no more than ten.

A general opinion is that these certificates are given only to new plants, but this is by no means the case, as many well-known subjects are every year honoured in this way. The trees and shrubs certificated during 1894 are:—

**AMYGDALUS PERSICA MAGNIFLORA.**—This beautiful variety of the double-flowered Peach was shown on February 13 by Messrs. Veitch, when a first-class certificate was awarded it. The flowers are of a brilliant crimson colour. These double Peaches, especially those of such decided tints as this, are really charming, flowering as they do so early in the year when most subjects still wear their winter garb. They are often used for forcing, and no doubt this newer form from its richness of colouring will be much sought after for this purpose.

**LOROPETALUM CHINENSE** is a near ally of the Witch Hazels (*Hamamelis*), and, like them, the flowers are composed of four narrow strap-shaped petals, a good deal twisted, and of a creamy-white tint. In other respects it is very different from the *Hamamelis*, the foliage being oblong, pointed, and of a deep green. It is also evergreen in character. This *Loropetalum* is a native of China, from whence it was introduced in 1880, but it is at the present day very uncommon. A first-class certificate was awarded to it on March 13, the flowers apparently having been brought on under glass.

**AZALEA ALBICANS.**—This is the result of intercrossing the Chinese *A. mollis* with the North American *A. occidentalis*. The flowers, which are borne in bold trusses, are like those of a good form of *A. mollis*, their colour being white, slightly suffused with yellow, which is more pronounced on the upper segments. An award of merit was bestowed upon this on March 13.

**FORSYTHIA INTERMEDIA.**—Two *Forsythias*, *suspensa* and *viridissima*, have been grown in our gardens for years, and this form, *intermedia*, distributed by M. Lemoine, of Nancy, about six or seven years ago, was announced as a hybrid between the two first-named species. In general appearance *F. intermedia* is about mid-way between the two, but though it may not be superior or even equal to its parents as an early spring-flowering shrub, it will be always welcome. An award of merit was given this on March 27.

**RHODODENDRON PRINCESS WILLIAM OF WURTEMBERG.**—Little seems to be known concerning the origin of this *Rhododendron*, but it is certainly a very distinct and telling variety. As shown it is of a sturdy, compact style of growth, while the flowers are borne in large trusses. The colour of the flowers is white, densely spotted and barred with crimson—quite a distinct feature among hardy *Rhododendrons*. A first-class certificate was awarded to it on April 24.

**RHODODENDRON RHOMBICUM.**—This was formerly known under the generic name of *Azalea* and is a

decidedly pretty early-flowering shrub. In colour *R. rhombicum* is a good deal like the North American *Rhodora canadensis*, but it forms altogether a more compact and bolder growing bush, while the flowers are much larger and better shaped, added to which they are of a brighter tint of rosy purple than those of the *Rhodora*. *Rhododendron rhombicum* may be looked upon as the first of the hardy *Azaleas* to unfold its blossoms. It has been long known in this country, but except at Kew, from whence the specimens came that received an award of merit on April 24, it is very rarely met with. This *Rhododendron* is a native of Japan, and in the island of Nippon it is said to be plentiful.

**RHODODENDRON ROSY BELL.**—This is one of the many hybrids raised, I believe, by Messrs. Davies, of Ormskirk, to whom we are indebted for that beautiful early-flowering variety *præcox*, which has now become so popular. *R. Rosy Bell*, which evidently claims parentage from *R. ciliatum*, is a dwarf, compact-growing plant with dark green Myrtle-like foliage. The flowers, which are rather blunt in shape and widely expanded at the mouth, are each from 1½ inches to 2 inches in diameter, and in the bud state of a deep reddish pink colour, which after they open becomes much paler. The interior of the flower is of a delicate blush, almost white. The blooms, which are borne in clusters well above the foliage, are slightly drooping or arranged in a nearly horizontal manner, and a pretty effect is produced by the contrast in colour between the unopened buds and the expanded blossoms, as well as by the crisped edges of the petals. An award of merit was bestowed upon it on April 24.

**PYRUS SPECTABILIS MAGNIFICA.**—The Chinese Crab (*Pyrus spectabilis*) is well known as one of the most beautiful of our early-flowering trees, and this form when better known will no doubt be much sought after. The flowers are larger and bolder than those of the type, while they are also somewhat deeper in colour. It was given an award of merit on April 24.

**EXOCHORDA ALBERTI.**—This Turkestan species of *Exochorda*, which has been introduced through the Russian gardens, differs a good deal from the better-known *Exochorda grandiflora*. It is of a stiffer and more upright habit of growth, while the leaves are rather longer and of a deeper green. The individual blooms are a good deal in the way of those of *E. grandiflora*, but they are borne in an erect rather closely packed spike; whereas those of *E. grandiflora* are arranged in a far looser manner. *E. Alberti* received an award of merit on April 24.

**RHODODENDRON HIGH BEECH HYBRID.**—This was announced as a hybrid between *R. Fortunei* and *R. Mrs. C. Butler*. It is certainly a very pretty *Rhododendron* with salmon-pink blossoms, which are very sweetly scented.

**LILAC MME. LEMOINE.**—This is one of the many double-flowered Lilacs raised by M. Lemoine, of Nancy. It differs from those previously grown in the flowers being pure white, and on this account as well as the duplex character of its blossoms it will doubtless become popular.

**LILAC SOUVENIR DE LOUIS SPATH.**—This is by no means a novelty, but it is one of the best of the rich deep-coloured single varieties, and on that account received, as well as the variety *Mme. Lemoine* just mentioned, a first-class certificate on May 8.

**LILAC PYRAMIDALE.**—Another of Lemoine's double varieties with massive panicles of bloom, purple in the bud state, but bluish lilac when fully expanded. There are so many of these double Lilacs now, that it is difficult to see the difference between them.

**LILAC GEANT DES BATAILLES.**—This is by no means a novelty, but it is a good single-flowered form, purple in the bud state, changing on expansion to a kind of rosy lilac. These last two forms received awards of merit on May 8.

**PIERIS FORMOSA.**—This is a highly ornamental evergreen shrub, introduced from Nepal in 1881. It is, however, hardy only in the favoured districts of England and in Ireland. It forms a

large, bold-growing bush somewhat like an *Arbutus*. The flowers, which are borne in terminal branching panicles, are white, slightly tinged green. They are urn-shaped, and, in common with several of their allies, are of a thick wax-like texture. The genus *Pieris* is nearly allied to *Andromeda*. An award of merit was bestowed upon *Pieris formosa* on May 8, the specimens having been sent from Glasnevin.

**MAGNOLIA PÆNIFLORA.**—This is certainly one of the best flowering shrubs certificated during the year 1894. *M. parviflora* is a freely-branched species, clothed with broadly ovate leaves of a deep green tint and 3 inches to 4 inches long. The flowers, which are about 5 inches in diameter, are white, becoming slightly tinged after expansion, while a conspicuous feature is formed by the cluster of erimson stamens in the centre of the flower. For this *Magnolia* we are indebted to Messrs. Veitch.

**WISTARIA MULTIFLORA.**—Some fifteen years ago a deal of attention was directed to this *Wistaria*, it being at times spoken of as superior to the old and well-known *W. sinensis*. Among other qualities claimed for it was the fact that the flower racemes reached a length of 1 yard. Time has, however, proved that it is not so free-flowering as the old kind, and the flowers are much smaller and distributed at wider intervals on the stem, so that it is not nearly so showy as the typical *W. sinensis*. At the same time it is both pretty and interesting, and some racemes of it shown at the Temple show when it received an award of merit were about 30 inches long.

**RHODODENDRON SNOWFLAKE.**—A standard plant of this *Rhododendron* was very showy by reason of the profusion of its large white blossoms. The only colouring consisted of a few reddish dots on the interior of the upper part of the flower.

**RHODODENDRON DUKE OF YORK.**—A showy variety of a rosy-pink, with brown spots on the upper segments.

**RHODODENDRON DUCHESS OF YORK.**—Salmon-pink, margins flushed rosy-pink, upper petals spotted green. These last two varieties resulted from the intercrossing of *R. Fortunei* and the garden variety *Scipio*, and to both awards of merit were given.

**FAGUS ROTUNDFOLIA.**—This is a very distinct Beech, the leaves being less than 1 inch in diameter and of a very deep green tint. It is of a close, upright habit of growth, and presents altogether a very uncommon appearance. A first-class certificate was awarded to it on June 12.

**SYCAMORE, CRIMSON-FRUITED.**—The Sycamore is a somewhat varied subject, and in this particular form the fruits are of a bright crimson colour, which renders it very telling. It received an award of merit on June 12.

**RUBUS JAPONICUS TRICOLOR.**—This is a slender growing Bramble with very decided variation. The young stems and leaf petioles are of a bright rose colour, while the leaves, which vary from cordate to three-lobed, are variegated in different ways. Some of the leaves are marked with green and white in about equal proportions, while in many, the younger ones especially, the white predominates, and in addition to this the youngest leaves are suffused with pink. As shown, this *Rubus* at a little distance reminded me very much of *Vitis heterophylla variegata*. It received a first-class certificate on July 10.

**RUBUS PHENICOLASICS.**—Under the name of the great Japanese Wineberry this has attracted a good deal of attention within the last few years. It is a bold, strong-growing, Raspberry-like species, the leaves of which consist of three heart-shaped leaflets, dark green above and whitish underneath. The stems, and more particularly the young shoots, are densely clothed with long reddish hairs, thus imparting a very striking feature to the plant. In the winter when devoid of foliage this is especially noticeable. The fruits are a good deal in the way of small Raspberries, and red when ripe. It was introduced in 1877, but it is only within the last few years that any particular attention has been directed towards it

as a fruit-bearing subject. On August 14 it was awarded a first-class certificate.

**ACER PURPURASCENS NIZETTI.**—This is a form of the Sycamore with the undersides of the leaves purplish red, the upper part being green, blotched in an irregular manner with cream. The leaf-stalks are red. This is seen at its best in the spring soon after the leaves are expanded, but an award of merit was given it on September 25 at the Chi-wick conference.

**ALEX AQUIFOLIUM LAWSONIANA.**—This is a very pretty Holly, but by no means a novelty. The leaves, which are very sparingly furnished with prickles, are oval in shape and of an olive green towards the margins, the centre being blotched with yellow and bright green disposed in a very irregular manner.

**VERONICA CUPRESSOIDES.**—This is one of the curious Whipcord Veronics, the members of which to a casual observer bear a far greater amount of resemblance to a small-growing conifer, such as some of the Retinosporas, than they do to a Veronica. In these the leaves are limited to small scales closely adpressed to the stem, exactly as in many of the Coniferae. *V. cupressoides* is upright in growth, very much branched, and of a bright green tint.

**VERONICA SALICORNIOIDES.**—This is dwarfier and of a more spreading habit than the last, the colour being light green tinged with yellow.

**VERONICA LYCOPODIOIDES.**—This is a little dense growing species with tiny dark green leaves arranged in four rows. These three Veronics were awarded first-class certificates on September 25.

**VITIS COIGNETIE.**—This large-leaved Japanese Vine has attracted a good deal of attention within the last year or two, a question among others that has arisen being whether it is distinct from the many species now in cultivation. The gorgeous autumn display furnished by a large Vine at Knap Hill has been told over and over again, and it is by some regarded as *Vitis Coignetie*, but at the same time it appears somewhat different from Messrs. Veitch's specimens. At all events it will serve to direct attention to the great beauty of these large-leaved Vines, which will lend themselves to many bold arrangements. T.

**Abies pungens glauca.**—The type of this beautiful Fir is one of the very best of the American Spruces. This is an exceedingly well-marked glaucous form, in every respect most distinct. It has on several occasions been shown at important meetings during the past year or two, always being an attractive feature by reason of its silvery-grey shade of colour overlaid with a bluish tint. As a specimen plant for the pleasure grounds or for avenue planting it will undoubtedly be much sought after as it becomes better known. Compared with *A. nobilis glauca*, it is, in my opinion, much the superior plant, being of more regular outline and superior growth, whilst its glaucous tint is deeper. From notes taken I should consider that it will be found to thrive well upon somewhat light soils, provided there is sufficient moisture.—G. H. A.

**Sciadopitys verticillata.**—Like your correspondent "G." (p. 32), I am of opinion that the reason this beautiful conifer is not more often seen in a flourishing condition is that it is frequently planted in too dry a situation, and it also seems to dislike removal. A soil partially composed of vegetable matter, more especially thoroughly decayed leaf-mould, suits it well, and perhaps this is owing to the fact that such a compost retains moisture for a longer period than soils which consist of light sandy loam, which prevails in so many places. At Kew, where many conifers are by no means seen at their best, there is a specimen of the Umbrella Pine in a very thriving state. It is planted in a cool, moist, but at the same time by no means waterlogged spot and progresses in a very satisfactory manner. The deep rich green tint is very characteristic of this *Sciadopitys* when in a thriving state. In this country, however, its rate of progress is but slow, and it will take a very

long time to attain the height of 100 feet, which it is said to do in Japan. The Umbrella Pine was first introduced by Messrs. Veitch about thirty-five years ago, and it still forms a prominent feature at their Coombe Wood nursery. It seems to be quite proof against our English winters. Gordon speaks of several varieties being in cultivation in Japan, but, with the exception of one with variegated leaves, they do not appear to have reached this country, though among the specimens met with, individual differences, of course, occur. The variegated-leaved form which was introduced by Fortune with so many other variegated-foliaged subjects had yellow leaves interspersed with those of the normal tint, and sometimes the variegation extended over half of the leaf, the rest being green. This variegated variety was very generally met with about twenty-five to thirty years ago in the collections of choice variegated plants then so popular, but it now seems to have almost dropped out of cultivation. A great drawback was its liability to revert to the type.—T.

**Hedera maderiensis variegata.**—No doubt the majority of the readers of THE GARDEN have proved the great value of this Ivy for the open. But is its worth so fully or so abundantly realised in the greenhouse and conservatory, and particularly during the dull season of the year? What could be brighter at this time than some well-coloured examples around the roof supports in the greenhouse or similar structure? At any time it is one of the most ornamental, and where grown in a cool, or even cold house in winter it is doubly valuable. By reason of its attractive foliage some pot plants may be turned to good account for the embellishment of entrance halls, or even in parts of the mansion itself. Thus used they would relieve the monotonous greenery of Palms, Ficus and evergreen shrubs. Many years ago, prior to its distribution, I called at Messrs. Osborne's nursery at Fulham, and was shown a house filled with young plants almost 2 feet high. As there seen the house was as effective as if filled with flowering plants, save for the sameness. Plants of similar size, however, and well coloured should surely prove of great service to the gardener and floral decorator alike, especially when flowering plants in pots are scarce.—E. J.

#### JANUARY FLOWERING SHRUBS.

GIVEN fairly mild open weather during the month of January, there will be (especially if it has not been very sharp before that time) several of our hardy shrubs whose blossoms will tend to lighten a dull winter's day. A comparatively uncommon subject, but one that is rapidly making its way in popular favour, is the Japanese Witch Hazel (*Hamamelis arborea*), which, though it attains the dimensions of a small tree, will yet flower freely as a shrub. The peculiar starry blossoms of a yellow hue with which the leafless twigs are crowded furnish a striking and uncommon feature. The general appearance is well shown in THE GARDEN, June 13, 1891, where there is a coloured plate of *H. arborea*. A sharp frost will destroy the full expanded blossoms, but a few mild days cause others to open and take their place. In the event of January being a very cold month this *Hamamelis* will not, as a rule, bloom till February. *H. arborea* is the best of the Witch Hazels, there being a smaller growing species (*H. japonica*) with paler blossoms that flowers, as a rule, about a month later. In some seasons that variety of the Mezereon known as autumnalis, or grandiflora, will bloom well in the month of January, and at other times it is over by Christmas. Should the weather be mild, however, the earliest blossoms of the typical kind will by the end of the month be well advanced towards opening. The Laurustinus has been flowering grandly this season, and where not cut by recent frosts it occupies a prominent place among January flowering shrubs. *Berberis*, or *Mahonia japonica* often has its long spikes of lemon-

tinted blossoms expanded by the new year, and during the second month the golden flowers of its North American relative, *Berberis Aquifolium*, commence to open. This last is one of the most beautiful of all our flowering shrubs, but its merits in this respect are very apt to be overlooked because it is so common. Where protected by a wall we may note several other subjects, the first of which, the Winter Jasmine (*Jasminum nudiflorum*), has been long in flower, while the deliciously fragrant blossoms of *Chimonanthus fragrans* are now expanding. They are not showy, but their perfume is very pleasing, and if a few sprays are cut just as the buds are bursting, they will open beautifully in water and fill a room with their fragrance. The Japan Quince (*Cydonia japonica*) will on a sunny wall be opening its earliest blossoms, and a bright object this forms in the depth of winter. Where they can be spared, some sprays of these cut as above noted in the case of the *Chimonanthus* will be pretty objects indoors. As the season advances other shrubs will expand their blossoms, and following the above most closely, we have those two sweet-scented Honeysuckles with white flowers—*Lonicera fragrantissima* and *L. Standishi*, both of which need the protection of a wall, and the Cornelian Cherry (*Cornus mas*). In this the inflorescence assumes the shape of little tufts of bright yellow blossoms, and being thickly disposed on the twigs, they are, when nearly everything else is bare, very attractive. Of dwarf plants of a shrubby character we have the pretty little Winter Heath (*Erica carnea* or *herbacea*), whose bright-coloured blossoms form a very charming feature. The white variety is also very pretty, though less showy than the typical kind. This little Heath will continue to flower for months together, and much the same may be said of some of the other subjects above mentioned, especially the Japan Quince. H. P.

#### **Saxifraga cotyledon varieties for pots.**

As a pot plant for the conservatory and greenhouse very few members of this genus can surpass this species and its varieties. Of these latter the most beautiful perhaps is that known in gardens as *S. nepalensis*, a charming plant when seen in good condition, and producing its great rosettes of silvery leaves fully 15 inches across. In moist sandy soil I have seen them even larger than this, the huge pyramid of white blossom at the base reaching almost to the extreme of the leaves. Indeed, this appears a characteristic of this variety, which one does not often see. Another point of distinction is the graduated form of the pyramid from base to summit. Some of the finest examples of this I have ever seen were grown in the late Mr. Parker's nursery at Tooting many years ago. The flower-spike is from 18 inches to 20 inches high, forming a perfect pyramid. Another good kind is *S. pyramidalis*, which is much more frequently seen in cultivation. In this the rosettes are more clustered and the leaves more erect, shorter and blunter than in the preceding. This variety, in my experience, has not the branching habit of *S. nepalensis*, nor do the flower-spikes possess the perfect pyramidal form of that kind, the flower spike for the first 4 inches or so being usually bare, developing eventually into a somewhat taller and denser plume-like pyramid. It is quite easy to increase the type and *S. pyramidalis* by division, while *S. nepalensis* can be best increased by offsets, which are produced at the base of the flowering rosettes. The offsets make greater progress if dibbled out into sandy loam a few inches apart. When grown in pots these should always be freely drained, and in addition to the sandy loam—which should constitute the bulk of the soil—some broken brick or old mortar rubbish will be found beneficial. Always pot firmly and avoid over-much water at the root. The size of pot must be regulated by the plants. Quantities of medium-sized plants are grown for market in pots 6 inches across.—E. J.

ORCHARD AND FRUIT GARDEN.

GLOU MORCEAU PEAR.

THE demand for this well-known Pear has been keener than usual this season, as many varieties have been of poor flavour or have failed to keep. Glou Morceau is an exception with me this year, being now in daily use for dessert and of very good quality. The fruit from both wall and bush trees is alike excellent, and a variety that is of superior flavour and a sound keeper in a notoriously bad season is worthy of special notice. Few varieties are so certain in cropping both in cold and warm districts if on the right stock. When I was foreman at a well-known place in Staffordshire we had bush trees of Glou Morceau worked on the Quince that seldom failed to bear fair crops, in spite of a bleak district and a wretchedly cold soil. The trees were simply put on the level ground, staked, and good soil brought and placed over the roots, thus forming raised mounds, afterwards mulching annually with farmyard manure. Those who have to contend with cold soils might adopt the same plan, procuring trees worked on the Quince, as it is the most suitable stock for such soils. The roots keep near the surface in search of the food contained in the mulchings, and will not descend into the cold and poor soil lower down unless actually forced by poverty. On warmer and deeper soils Glou Morceau grows and produces heavy crops on the Pear stock. For the first few years it may grow rampantly, but if the shoots are allowed to remain their full length or nearly so, fruit buds will be formed the whole length, and the crop of fruit will effectively check any exuberance. This applies equally to wall or other trees out in the open, and is much to be preferred to root pruning. Many Pears are inferior in flavour if grown to a large size, but the finer Glou Morceau is, the better the quality in this neighbourhood, and those people who desire exceptionally large fruit have a good opportunity to secure them from wall trees by thinning them out while small to 6 or 8 inches apart each way and mulching with manure; also giving occasional soakings of liquid manure. Trees worked on the Quince are very grateful for these applications, deriving more benefit therefrom than trees on the Pear stock.

W. G. C.

**Apple Lane's Prince Albert.**—I quite agree with "E. M.'s" note (p. 36) as to canker not usually attacking this Apple. I have during the last week looked over eighty trees, which show no symptoms of disease. The tree that I alluded to (p. 23) was one of a lot of thirteen, all of different kinds, which were planted in heavy, damp, and partially shaded ground as an experiment, with a view to seeing which sorts stood the test best. Lane's Prince Albert has fared better than seven of the sorts and worse than five, the only one that is thoroughly satisfactory being Duchess of Oldenburg. The situation is exceptional, and would not be chosen except for experimental purposes, the bark of the trees becoming emerald-green every year and having to be cleansed with dressings every winter.—S. W. F.

**Digging round fruit trees.**—At page 24 "Y. A. H." condemns the practice of digging too near the stems of fruit trees on walls. I quite agree with his remarks, and would advise that the soil be simply pricked over, so as to break the hard crust caused by repeated treading. This is my plan, doing it at the beginning of the new year, afterwards sprinkling on a little artificial manure, and finally mulching with spent hot-bed material. By this means the surface roots are preserved, fed, and rapidly increased. I do not hold with the too common practice of mulching fruit

trees in autumn, especially on retentive soils and with strong green manure. This has a tendency to keep the surface raw and cold and to drive the roots in a downward direction. Spring mulching is far preferable.—J. C.

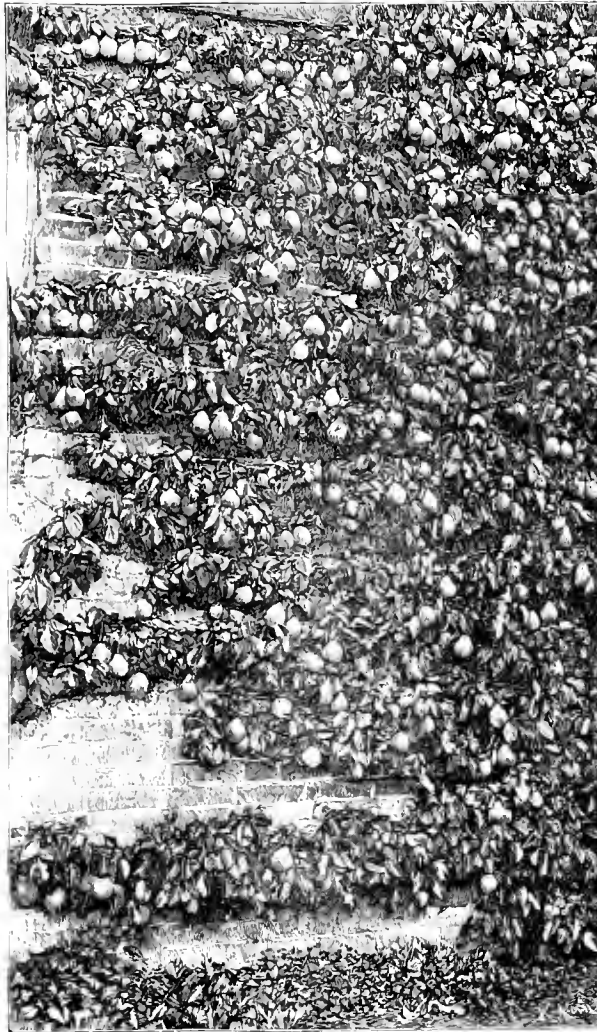
**Too many Apples.**—The Royal Horticultural Society would benefit the fruit-growing community of Great Britain if it would reduce the number of sorts of Apples which are now offered by nurserymen to the public, and establish on an authoritative basis those which are most likely to be remunerative to the planter. This is not difficult, as the members of the fruit committee assemble from various parts of the country. Supposing that the best part of the sale period for Apples lasts from July to the end of March, a

fruit. Many other kitchen Apples are equally good, and if these are mixed with dessert sorts, such as Cox's Orange, Mother, and other kinds, a very superior drink can be made, thus giving two chances of employing an abundant crop.—T. F. RIVERS, *Sawbridgeworth, Jan. 15.*—*Field.*

APPLES AND CANKER.

APPLE KING OF THE PIPPINS, mentioned by Mr. Wythes at p. 22, did remarkably well in poor soil with me some years ago, and it has been my best dessert Apple this year, as Cox's Orange Pippin has failed in different parts of the garden. I cannot understand the experience of "S. W. F." as to Apples being more liable to canker on the Paradise than on the Crab stock. He does not seem very positive, and probably has not given the matter much attention. I have proved again and again that the best way to prevent canker in Apple trees is to prepare the ground well by trenching it to a depth of 2 feet, less or more according to the nature of the soil. Very often 18 inches is as deep as it is possible to go, and whether the trees are grafted on the Crab or the Paradise stock they ought to be healthy, well-rooted trees to begin with. Many trees are neither healthy nor well rooted, and if such are planted in ground that has not had any preparation, the wonder would be that they did not canker.

In healthy, well-rooted trees grown in well-prepared soil I am confident that canker will not be likely to appear, except in the case of a very few varieties which are peculiarly liable to this disease. The only three I have had any trouble with have been Wellington, Cellini and Ribston Pippin. We can do without Cellini, and the way I have cured the disease on the others has simply been to lift the roots up nearer the surface, and instead of filling in all the old soil during this process I make up with fresh loam that has not been near the roots of Apple trees. Of course, this cure is applied as soon as it is seen that canker is present. Let anyone try this on certain trees and leave others cankered in the same way without interfering with the roots, and the result will be convincing. The reason why trees on the Paradise stock are not so liable to canker as those on the Crab is doubtless owing to the fact that the former have the greater tendency to root near the surface, and cultivators acting on this assumption spread the roots out well near the surface when planting them; moreover, the downward tendency of the roots is checked by mulching over the surface where the roots are with a slight dressing of manure during the summer months. All roots have a natural tendency to travel where they can get the best food. Surface roots push freely from the main stem of the Paradise stock quite up to the union of the graft with the scion, and the fine white roots may be seen pushing into the moist mulch even above the surface of the ground. This does not occur with the trees worked on the Crab stock; they are all to be found working deeper and deeper into the poor, damp, and oftentimes wet subsoil, a state of things which is sure to produce canker. I always advise planters when setting out their trees on the Paradise stock to plant quite up to the union



Part of a tree of Glou Morceau Pear.

period of nine months, three sorts of Apples per month, or even less, would be quite sufficient; but in any case the number of Apples may be reduced to thirty-six, allowing a surplus for the prejudices and possibly the practical experience of planters in many localities, who are certain to adhere to the knowledge gained from experience. It would not be difficult for the fruit committee to select those kinds which can be honestly recommended to the public. It does not seem to be generally known that all Apples of good quality will make good cider. It is not at all necessary to plant the so-called cider Apples. Probably these were originally chosen because they will bear any amount of rough usage. The Apple known as Rymer is a first-rate cider-making Apple—it is usually grown as a kitchen

of the stock with the scion. In this case roots are produced freely from the main stem up to the point of connection. I grow all mentioned by "S. W. F." at p. 23, with the exception of King of Tompkins County. Bismarck is a good bearer now that it has become established, but it is quite second-rate as regards cooking qualities. As the fruit is good looking it might do to sell, and might be purchased by those who did not exactly know what they were buying. Lane's Prince Albert is one of the very best, but the trees on the Paradise cannot get up amongst the others; the yearly weight of fruit they have to bear is enough to dwarf the trees into mere pigmies. I have planted some on the Crab stock, and probably this will throw more vigour into them.

J. DORGLAS.

#### DESSERT APPLES.

MANY of the Apples of recent introduction, although conspicuous for size and external beauty, certainly lack quality as compared with older varieties. This deficiency is more noticeable in the dessert varieties. Moreover, many of the newer kinds will not keep any time after they are ripe, while the cropping qualities and general constitution of the trees are not such as to warrant their being freely planted in any but the most favoured districts. The earliest Apple I know of is the White Juneating, which ripens about the end of June in the south and the first week in July in the garden here. It is below medium size and creamy white in colour, but I cannot say much for the flavour, it being rather too acid to be pleasant. It is, however, a most continuous cropper in any form, doing well with me as an espalier. The next to succeed it is Gladstone, but this Apple, although handsome when exposed to the sun, is very disappointing, and even when eaten from the tree is often mealy and flavourless. One tree of it is quite sufficient in any garden. Lady Sudeley, somewhat recently introduced, is perhaps the handsomest dessert Apple ripening in early autumn, but, like the foregoing, it will not keep long, although if eaten within a week after being gathered it is crisp, juicy and excellent. My only experience of it is in the horizontal cordon form, where it grows freely enough, but fruits shyly, and from what I learn from other sources I am afraid its culture will never become general. Perhaps, however, it may crop better further south than with me. In my opinion that showy little Apple Beauty of Bath will be the early dessert variety of the future. Not only has it symmetry, colour and very good flavour, but the fruit will remain firm and juicy after the majority of autumn Apples have become useless. The tree bears well in any form, hundreds having been planted in the bush form during the last two years, the fruit from espaliers being quite a picture. Worcester Pearmain was very popular for a year or two, but its treacherous character as a keeper was soon discovered, few market growers planting it now-a-days. Perhaps the most reliable dessert Apple, all points considered, is the old King of the Pippins. It does well in any district, and quickly grows into a large tree. No fault can be found with the flavour, while it will keep in saleable condition for several months. As a rule, too much praise is accorded Cox's Orange Pippin. This Apple is very particular as to soil and locality, is slow in coming into bearing, while the blossom is extremely tender. Its capricious character is proved by the fact that it is never seen in any quantity in the market. I have occasionally seen fair crops on light soils, and the flavour is of the finest. Ribston Pippin, esteemed by all for its rich aromatic flavour, seldom makes a large tree, as it usually falls a victim to canker in its worst form two or three years after being planted. The finest fruit is produced from espaliers grown in a sandy soil, but last year I saw a large standard growing in the orchard at Ossington Hall, twelve miles from here, apparently very old, but healthy and loaded with the largest fruit have ever seen of this variety. The situation

was high, though sheltered, and the soil well drained. Margil, a small Apple similar to Ribston in flavour, but superior in my opinion, is seldom met with now, its chief fault also being canker. If grown on a warm soil and lifted once or twice, say the second and fourth year after planting, this malady is not so likely to appear, the great point being to keep the roots near the surface. It should be worked on the Paradise stock. The only cure for canker is said by some to lie in lifting the trees and bringing old roots near the sun's warmth, but a practical fruit grower assured me last year that he had dressed all his cankered Apple trees with "soluble paradim," with the result that the malady entirely disappeared and a healthy and vigorous growth followed. If this be so, these high-flavoured, though capricious, Apples may yet be grown with more certainty than heretofore. Really good late dessert Apples are, perhaps, the scarcest of all, but Fearn's Pippin, a constant cropper, in the way of Blenheim, but smaller, and suited to all climates; Spice d'Arcy, sometimes called Baddow Pippin, an Essex Apple, small, but delicious, and a good bearer; Sturmer Pippin and Court Pendu Plat may be planted with confidence. The last-named is so late in blooming, that it seldom gets injured by frost. I have seen good showy and well-flavoured fruit from trees about Bury St. Edmunds. It keeps sound and plump till May. King of Tompkins County, an American Apple, large, showy, and of extra good quality, must be mentioned. Very few large Apples are so richly flavoured, but although my experience of it is limited to cordons, I learn from good authority that it is tender, and never likely to become a market Apple, at any rate so far as English grown fruit is concerned. Could we but impart to it the cropping powers of Lane's Prince Albert, it would indeed be an acquisition. Lastly, that good old-fashioned late Apple Scarlet Nonpareil should be grown in every orchard and garden. I saw a beautiful dish at Earl's Court exhibition in May, 1892, as plump and fresh as could be desired. Its rich scarlet colour and good flavour are further points in its favour.

J. CRAWFORD.

**Grape Muscat Hamburg.**—The interesting notes that have appeared in THE GARDEN recently should be helpful to growers, more so if the writer would in all instances give soil and under what conditions the Vines are growing. About fifteen years ago this kind used to be grown well at Farnboro' Hill, Hants. I well remember seeing bunches of it from 4 lbs. to 6 lbs. in weight, perfect in colour, and not in the least shanked. Mr. McLaurin, the gardener, considered it wanted a warm open border. No doubt the dry nature of the soil was favourable to it. The border, which was an outside one, was heavily mulched and kept well watered in dry weather.—J. CROOK.

**Apple Mannington's Pearmain.**—I have a pyramid tree of this, and for the last four years it has never failed to crop, although growing in an exposed condition. I am now—January 26—sending it to the table, and very good it is. The flesh is yellow, tender, rich and juicy, and highly flavoured. I find it desirable to allow it to hang on the tree as long as possible, as it is apt to shrivel if gathered too early.—J. CROOK.

—This is a valuable dessert fruit, as it remains good well into March, and now the fruits are delicious. It may not find favour with those who prefer a large Pear, but it is large enough for dessert and one of the best flavoured fruits in season at this date. Of varieties of Apples we have too many, but this is one of the kinds we want more of. It does well as a pyramid or bush. It is not a strong grower, being compact and well suited for a restricted area. The fruits are greenish-yellow, with a brighter colour on the sunny side and russet markings. To keep it well into the spring the fruit should be left on the trees as late as possible, as if gathered early or kept in a warm store, it shrivels badly and loses flavour. It thrives well in light soil and fruits freely in a

small state. I have cordon trees of this variety which fruited the second season after planting.—G. WYTHES.

## FLOWER GARDEN.

### 1894 IN SOUTH DEVON.

IX looking back over the last twelve months, and critically assessing the merits and demerits of 1894, it is impossible to arrive at a conclusion other than that its drawbacks in the way of weather considerably outweighed its advantages. The year commenced with bitter east wind and frost that sent the thermometer on the Grass down to 11°. Then came the snow—15 inches deep over everything. Then a rapid thaw and mild weather until almost the end of February. March was dry and cold without any great range of temperature. April was the only really satisfactory month of the twelve—absolutely frostless; a month in which the winds were quiet, a fair amount of rain fell, and everything promised well for a prosperous year. This hope was soon dispelled, for May was cold and windy, with a frost on the 21st, which, however, was too light to do any damage to speak of in this particular neighbourhood. June was more windy than May, and cold until the last week. July and August were likewise very windy and unsummer-like, and with the last day of August the last hope of summer vanished. September was fine and still, but colder than the average for the month, while October, November, and December were unseasonably warm, the first two being also extremely wet.

The season has been an extended one for flowers, Dog Roses having been picked on May 9, and perfect buds of Safrano from the open wall on December 30. Magnolia grandiflora was in bloom for nearly six months, the first blossom opening towards the end of June and the last being cut on December 2. Heliotropes that had been left out remained unhurt by the frost until the last day of the year, but in spite of its length the flower season was unsatisfactory, winds, rain, and the ungenial weather militating against an effective display. Subtropical flowering plants, such as Hedychiums and Cannas iridiflora Ehmanni, were far inferior both in leafage and bloom to what they were in 1893. Clumps of Agapanthus umbellatus planted out, which have flowered well in other years, showed no signs of beauty of Phacelia campanularia was cut short prematurely.

We are now experiencing the effect of the season on certain bulbs and tubers. Freesia refracta alba has, seemingly, refused to ripen at all, a large collection of this charming Cape bulb which year after year has given an abundant harvest of deliciously scented blooms soon after Christmas having thrown up but a solitary flower-scape here and there, and Arums which are grown in quantity and particularly well at an establishment in the vicinity have not flowered so unsatisfactorily for ten winters; while doubtless the damp was a predisposing cause in the case of the Liliun candidum disease, which was rampant during the past summer.

What legacy has been left us by 1894, as far as the present year's crop is concerned, will not be known yet awhile, but it is well not to be too sanguine as to the result. For plantations of young fruit trees made in the winter of 1893-94 there is no doubt that the past year has been favourable, as they have taken hold of the ground well and have made fine growth. In



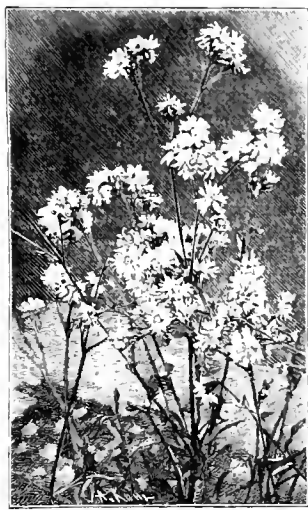
the flower garden, too, there are bright spots to turn to, the Bamboos and shrubby Spiræas having grown remarkably, and many herbaceous plants have been benefited by rather than suffered from their late experiences.

Many vegetables, more especially Seakale, have not been equal to the samples of 1893. Outdoor Tomatoes were a complete failure. The Pear crop was a very heavy one, and Apples, from young trees on the Paradise, were plentiful, with the exception of Cox's Orange Pippin, of which, I understand, the crop was poor throughout the country. Strawberries, although untouched by the frost, were not so heavy a crop as in 1893, but bush fruit was an average yield.

It is not seemly to speak ill of the departed. We will, therefore, content ourselves with expressing a hope that 1895 may deal gently with us, for most of us feel the need of a little indulgence after the rigorous, but doubtless salutary lessons we have received from his blustering and gloomy predecessor. S. W. F.

A NEW LYCHNIS.

THE illustration represents a most beautiful flower, which, unfortunately, like many other good things, is the bearer of an absurdly long name. It is called *Lychnis Flœ-cuculi plenissima* Ad. Muss., and is very distinct from the ordinary and well-known form of the double Ragged Robin. The engraving was made from a photograph of a plant growing in a sloping rocky border in the nurseries of Messrs. R. Veitch and Son, Exeter, where it has flowered continuously from early summer till late in autumn. Of its hardiness there can be no doubt, as, in spite of its having been laden with an abundance of flowers during the whole of last summer, the plant has stood a severe winter without protection of any kind, and at the time



A new fringed variety of the double Ragged Robin. Engraved for THE GARDEN from a photograph sent by Mr. F. W. Meyer, Exeter.

sent no difficulties whatever, as I saw it flourishing in ordinary somewhat heavy loam mixed with a few stones. The plant is still scarce, but it is sure to become a general favourite. The only thing against it is its name, and it is to be hoped that this will be changed to *Lychnis fimbriata*, *L. laciniata*, or some other short appellation more suitable and expressive than the one given above. For a popular name perhaps Fringed *Lychnis* might do. M.

CHRISTMAS ROSES.

HELLEBORUS NIGER ANGUSTIFOLIUS, one would think, could not be much excelled when seen well grown and clean. There are good varieties I know, the flowers of good form, and if not quite pure, the tints can scarcely be considered faults, but in most kinds excepting this one there is to my mind a feature of coarseness in the dark coloured stems, bracts, and often the under parts of the sepals. It is because this kind has clear, pale, delicate, or apple-green stems, and flowers of the snowiest whiteness without tint and of good size and shape withal that I value it. Moreover, unlike most vars. of niger, it produces as a rule long scapes. In the Bath variety and several others you would scarcely get the convenient long stem without the aid of hand-glasses or the forcing pits. I do not know after all that the long stems when normally grown are of much moment, because if you want to keep your Christmas Roses clean and serviceable, the shelter needful for clean flowers helps to secure this feature by drawing out the scapes of all the varieties. Another good quality I like in this kind is its robustness, and the facility, owing to its free habit of growth, with which it can be propagated and transplanted. Perhaps the readiest and most profitable way of dealing with it is to arrange the plants so that they can be covered with ordinary garden frames or lights. In November or earlier all that would be necessary would be to give a dressing to the plants to clear them of slugs, afterwards washing them down and bringing over them the lights or cold frame. This method secures perfect flowers free from slug grazing and splashes, and otherwise facilitates the future health of the plant, for if the frame is left long enough there can be no doubt that the dryness and partial protection from frost will benefit the plants and keep their foliage in better condition.

The niger section of the genus *Helleborus* is unmanageable in some districts. I have heard from several correspondents in the western counties that they cannot keep a presentable plant of any of the Christmas Roses, and in each case I know my correspondents to be expert gardeners. At the same time it is known that in their gardens the other species of *Helleborus*, the so-called Lenten Roses, flourish. This is a fact that can hardly be said to help one in finding the cause for failure of the niger section, though I believe that the two sections are widely distinct botanically in many ways, and especially in the features of their roots. I believe the facts that are available on this subject are such, that were the causes of the failure of *Helleborus niger* in certain districts to be investigated, they would form data sufficient and reliable to go upon, and I for one should feel very grateful for the views of those who have studied the subject. Personally, I have no difficulty whatever with any of the *Hellebores*, but during twenty-five years of considerable correspondence, and no time more than the present season, I have heard laments that the Christmas Roses cannot be grown successfully. There is one simple mode of culture, which was taught me by Mr. Moore, of Glasnevin, which proves of great benefit to plants where they do

not otherwise refuse to grow in the above described manner. It is that of planting at a fairly good depth in land of deep tilth, and, when the plants had become fairly established, mulching annually with well-decayed manure or vegetable soil. I am not for a moment suggesting this as a mode of planting to meet the above-mentioned difficulties, because I believe this and even more have been done in trying to coax new plantings, but I am sure of this, that it may be made the means of invigorating old plants in a remarkable degree and in a comparatively short space of time. I do not care for manure being incorporated with the soil when plants are first set out, and I always give it on the surface. J. Wood.

THE SHOW AURICULA.

THE Auricula fancier divides his favourite flower into four sections, the green-edged, grey-edged,



Auricula Mrs. Moore.

white-edged and self-edged. None of the green-edged varieties have farina on the leaves, and a good green-edged variety should have none on the edge of the corolla. All of them have, or ought to have, a yellow or orange tube to the corolla, and the centre of the flower should be densely coated with farina; next, a blackish or deep purple irregular band, as seen in the woodcut, and the edge of green, grey, white or the dark band entirely covers the margin, forming a self edge. All the classes, except the green-edged, have mealed or green foliage, sometimes thinly laid on and in other instances the meal so thick as to entirely cover the green of the leaf underneath. No plant is so easily grown as the Auricula if it is not stifled under glass. If the Auricula is grown under glass the plants should be placed in ordinary garden frames. The glass lights should only be used to keep the plants from excessive wet. In dry weather, even if cold, the lights ought to be drawn off. Even when the plants are put into glass houses in the spring air should be given freely and the plants kept quite near the glass roof. This nearness to the roof promotes and

of writing (January) is already pushing forth its young growth for the coming season.

The plant when in bloom forms a handsome bush about 18 inches high and 2 feet in diameter. The foliage is like that of its relative, the Ragged Robin, but the flowers, which are borne in loose panicles, are very much larger, very double, and beautifully fringed. The colour is a bright pink, and its wealth of flowers is almost phenomenal. Its culture seems to pre-

maintains a healthy and compact growth. After the last days of January the flower-trusses appear. Most of the fanciers now-a-days have light, airy glasshouses, and they place the plants in these for the convenience of attending to them and watching with some degree of comfort the development of the trusses in inclement weather. Most of them have a heating apparatus to keep out frost merely. The potting soil ought to be good decayed fibrous loam. I find the best is that obtained from a common where Bracken grows. Add to it a fourth part of decayed manure, with as much leaf-mould and coarse sand if necessary.

J. DOUGLAS.

#### FLOWER GARDEN NOTES.

**TUFTED PANSIES.**—The note in a recent number as to the exceptional growth made by the majority of herbaceous plants right through the closing months of 1894 is especially true of tufted Pansies, an inspection of the beds showing that with one exception all varieties started away well from the planting, made capital growth, and are now nice, bushy little plants that, given favourable weather, will be very early in flower. The exception is *Duchess of Fife*, which, I regret to say, gets the disease badly, and of which, consequently, good cuttings are not easily obtainable. I notice with much surprise that the recommendation is still occasionally given to keep tufted Pansies in the cutting bed until the spring and then plant out. It would be interesting to know what are the exceptional conditions that necessitate such treatment. It cannot be that very severe weather is feared, for they have come safely through a winter when for several successive nights the glass has dropped to within a few degrees of zero, and even a combination of damp and severe cold would hardly affect such a moisture-loving plant. There are few places in which treated as if thoroughly hardy they will not do well, the exception being, perhaps, in those flower gardens where the soil is poor and dry and the subsoil very porous. Even here, however, they can be grown with a fair amount of success if a compost consisting of two parts heavy road sidings and one of cow manure is incorporated with the natural soil and the surface gets a good mulching as soon as possible after planting. If, on the other hand, the natural soil is so heavy that it works badly, it is a good plan to mix with it a liberal dose of spent Mushroom manure and leaf soil in equal proportions. To secure a long flowering season, cuttings should be inserted in July or very early in August, shaded a little, and kept thoroughly moist to secure a quick formation of roots, and planted out as early in October as the beds can be prepared. A mulching of Mushroom or peat moss manure will be found conducive to rapid growth and early development of flower, and, as above stated, is especially to be recommended for light soils. Where the plants are still in the cutting beds it is needless to say that they should be transferred to permanent quarters as soon as possible, lifting carefully to prevent mutilation of the root. It may be noted that it is the safer plan to make sure of cuttings rather than trust to later propagation by division when a considerable increase in the stock is contemplated. This latter is, of course, always practicable with the *Violetta* type and a few stronger varieties, but there are many now included among tufted Pansies that are hardly more amenable to propagation by division than the true Pansy.

**CARNATIONS.**—Nearly all remarks made on tufted Pansies are applicable to Carnations. The best display is always obtained from plants that are put out early in autumn, and if suitable soil is provided, early layering practised and due attention given, there is not much difficulty in securing good plants at that time, especially in a season like 1894, when an over-average rainfall was conducive to early root-formation. If planting was left over from the autumn, it should be put in hand as soon as the state of the weather and condition of the ground will permit. It is the knowledge

that in some seasons such conditions are not obtainable until February is well advanced that is one strong argument in favour of autumn planting. Only on one or two occasions, when the summer has been against the chance of securing good grass until late and the layers in October were but poorly rooted, have they remained with me on the old plants until the spring. If not already done, the Carnation beds may receive a mulching, and if allowed to remain on the beds throughout the summer it will be found capital stuff to incorporate with the layering soil. Such a compost is essentially moisture-holding.

**SPRING BULBS.**—Unless we get exceptionally mild weather, spring bulbs (I was thinking more especially of Daffodils) will be nothing like so early as in 1894, a result probably due to the difference in the immediately preceding summers, for, whereas in 1893 the great heat and prolonged drought were answerable for an early ripening of the foliage and an early starting of the bulbs, the conditions last summer were exactly reversed—the foliage remained green until very late in the season, the ripening of the bulbs was deferred and the starting into growth for the present season proportionately late. Where Daffodils are in great request as cut flowers it is well to note the date of flowering (in an average season) of the different varieties as they are obtained, so that one may increase or diminish their numbers as they are likely to be required. These remarks naturally apply to flowers for cutting, and not to their naturalisation for effect in the flower garden and pleasure grounds. Here they will be used as they may be best adapted to different soils and situations and in variety, that the flowering season may be prolonged as much as possible, only it must be remembered that each separate clump should be composed of one variety. Naturalisation becomes a farce when there is an indiscriminate mixture of trumpet and chalice-cup flowers, representing the months from February to May.

**FLOWERING SHRUBS.**—Beds of these may have their final tidy up for the season, any little pruning required finished, and when, as often happens, the beds are in the immediate neighbourhood of trees and are fairly covered with autumn leaves, the latter can have a thin coating of half-decomposed leaf soil shaken over them instead of raking over the beds. This treatment may be specially recommended for hardy Azaleas and all shallow-rooting American plants, and on poor, dry soils if cow manure can be substituted for the leaf soil so much the better. Whilst on this subject I should like to caution those who are answerable for the cutting in connection with the flower basket to be very careful in their treatment of hardy Azaleas. The careless flower gatherer is apt to nip here and there, spoiling the appearance of the plant and encouraging a lot of small growth that is of no earthly use, besides damaging the prospects of a good display of flower for the next season. The proper way is to take those flowers that are on straggling, awkwardly placed shoots, cutting to a back break that is likely to develop into a strong serviceable shoot. The ordinary *A. pontica*, about the sweetest member of the family, as it is when in mass one of the most showy, was planted here rather largely in the old days, but, unfortunately, in rather a strange manner, dotted here and there among common Rhododendrons instead of in bold masses. No notice was taken of them for many years, the consequence being that in the majority of cases the Rhododendrons had nearly smothered them, and the Azaleas grew tall, but very straggling. By dint, however, of heading them back and cutting the Rhododendrons well away from them we have converted them into very fair specimens, and very effective they are in the flowering season, dense masses of yellow set, as it were, in a framework of evergreens.

Clarmont.

E. BURRELL.

**Common garden Thyme.**—It is worthy of notice how well this thrives on old house walls. Our garden walls are of this material, and on one portion of them we have an abundance of Thyme. However

severe the winter, it does not get killed, while that growing on the level ground is often cut down. That on the wall grows hard and wiry compared to the other.—J. CROOK.

**The Gladwin** (*Iris foetidissima*).—When at Torquay in November I saw hundreds of clumps of this plant in the hedgerows by the roadside, and handsome they were, laden with a profusion of orange-red berries. In the neighbourhood of Chudleigh, a few miles out of Exeter, I saw much of this *Iris* growing on the dry woodland banks and hedgerows also. From what I saw of it there I resolved to grow it for its ornamental red berries during the winter.—E. M.

**Statice latifolia.**—This a good late summer flowering perennial either for the border or for the rockery in a good open spot where a deep root-run may be afforded it. It is the showiest and most vigorous perhaps of the hardy kinds, and seen in bold groups in full flower forms quite a distinct feature. The plant may be raised from seed, though this is not always to be depended upon, particularly after a somewhat sunless summer like that of 1894. A better way of raising stock, and certainly a safer and quicker method of obtaining good plants, is by cuttings of the root. Judging by appearances, there is no indication that the plant will increase in this way, as all the growth usually springs from a forked head at the crown. But if a plant is lifted and some of the roots detached and cut into lengths of a couple of inches or even less, a good stock may soon be obtained. The stronger roots will even bear being halved or quartered, though such extremes are rarely needful outside a nursery. Insert the pieces of roots in a pot in sandy soil with the apex just protruding, and where possible place them in warmth in the greenhouse, or, better still, in slight bottom-heat. In a few weeks small breaks will appear, and as these progress gradually harden off and treat subsequently in the usual way of cuttings. By the month of June with careful treatment the young plants will be ready for planting out in their permanent positions.—E. J.

#### HARDY HERBACEOUS PLANTS FROM SEED.

THE time is drawing near when the sowing of seeds of choice perennials should receive attention. Many amateurs probably working on the system of "sowing the seeds as soon as ripe" will have sown such as they were themselves able to secure in the past summer and autumn. I do not consider that anything is gained by sowing seed as soon as ripe, but rather the reverse. One very obvious disadvantage of the system is that some species and varieties of plants germinate so quickly, that they appear above ground at a season of the year by no means favourable to their well-being. And even supposing them to be sufficiently hardy to endure frost with impunity, there is the additional risk of the seedlings being devoured by slugs. For these reasons, therefore, it is always advisable to delay sowing the seeds for a month or two after being collected—sufficiently late, in fact, to ensure their remaining dormant through the winter months. It is a very common practice to sow the majority of seeds in pots, pans, or boxes of fine soil, though I am by no means convinced that this is the safest and best way. Of course there are risks and uncertainties whatever method is employed, though I incline to the belief that the greater risk is encountered when the seeds are sown in well-drained pots. These latter are too often an obvious evil, by reason of the frequent and repeated waterings which become necessary—an operation responsible for the loss of much good and valuable seed. A far simpler way, and I venture to think a much safer one at the same time, is that of sowing the seeds in the open ground, or in ground at least that can be

protected overhead by a spare light. For many things even this protection would be unnecessary, particularly for the stronger growing kinds, such as Lupines, Hollyhocks, Gaillardias, many Poppies, Everlasting Peas, and others which germinate quickly and soon make vigorous plants ready for transplanting. Such as these may be gathered together in one block for instance, while another may be set apart for such things as *Coreopsis*, *Campanulas* of the Peach-leaved section, also *C. latifolia*, which, though somewhat strong growing, has seeds of small size. This batch should also include such things as *Adonis*, *Geum*, *Lycnis chalcidonica* and *Haageana*, *Dracocephalum*, *Sweet William*, *Columbines*, *Agrostemma*, *Armeria*, and many others; while a third section could well be made up of many species of *Primula*, also *Polyanthus* and *Auricula*, herbaceous *Lobelias*, *Lycnis Lagasce*, *Campanulas* of the *turbinata* group, also *fragilis*, *isophylla*, and indeed any of the very minute-seeded kinds that require either sowing on the surface merely or with a very slight covering. All such as these repay for sowing in a frame which may be darkened at will, and thus save much labour and anxiety in watering. In this latter the soil should be prepared by digging and an inch of finely sifted soil added on the surface and made somewhat firm. Using very dry soil on the surface will dispense with adhesiveness in firming. When this is done a good watering may be given and the seeds sown thinly on the following day, marking out a small plot for each and labelling as the work proceeds. Provided a good watering be given at the start and the frame darkened, little else will be needed for some time.

All the larger seeded kinds in the open will be best sown in shallow drills a few inches apart, protecting them from birds and cats by sprays of Gorse, Holly, or similar things. For very rare and choice alpiners, or such as may take a long time to germinate, for example, some of the *Gentians*, *Hellebores*, *Hepaticas*, *Primulas*, &c., it is a good plan to sow the seeds in pots in the usual way, afterwards standing each pot in a saucer of water. By supplying the water in this manner the soil will be kept moist without fear of disturbing the seeds by repeated surface waterings. In adopting this method it will be necessary now and again to allow the saucer to become quite dry, otherwise the soil may become sour. If the pots are covered with darkened glass and occupy a shady place, they will only require occasional fresh supplies of water below to keep the soil sufficiently moist.

It is not safe to discard seed-pots for at least two years, as many things are slow to vegetate. This is particularly true of *Trollius*, *Anthericum*, *Hellebore*, and many other things even when freshly gathered seeds only are employed. Indeed I have more than once thought that the sowing of freshly gathered seeds is a mistake, and that some species at least produce equally good results and germinate more quickly when seemingly kept for a few months. For instance, I have experience of *Helleborus* taking three years to germinate, and *Trollius* and *Anthericum* nearly two and a half years when the seed has been sown as soon as ripe. These seeds were fully ripe when collected even to falling, while others of the same batch kept over have appeared above ground in a little more than half the time in the first named, and considerably earlier in the others. *Dictamnus* has some peculiarities also when raising it from seed, and much variation and uncertainty also exist among the *Columbines*. Is it likely that seeds are influenced in this respect by the presence or absence of sunlight and sun-heat at

their time of ripening, and their vitality lessened or increased in proportion? E. J.

#### BEGONIA SEMPERFLORENS VERNON IN THE FLOWER GARDEN.

OPINIONS will probably differ about the value of this *Begonia* as a summer bedding plant. I noticed in *THE GARDEN* towards the end of last summer that more than one writer spoke rather highly of it for that purpose. I do not know if my experience was in any way singular regarding it, but I cannot say that I was particularly struck with it, because when grown alone in a bed there was a good deal of sameness about it. There is not distinction enough between the leaves and the flowers to please me. Another lot of plants in a bed that had a wide band of white variegated *Pelargoniums* round it was more effective, and the white variegation against the bronze foliage of this *Begonia* was a good contrast. I do not think that it can be successfully used in the flower garden unless it is associated with a plant with a different coloured leaf. A moderately sized bed, pretty well filled with plants of this *Begonia*, and a good edging of *Dactylis glomerata* would be fairly satisfactory, as what is wanted is something to brighten up the dull tone of the bronzy leaves. One point in its favour is that a good stock of plants can be raised from seed the same season they are wanted for use. Plants raised at the same time and treated in the same way as the tuberous-rooted *Begonias* will be large enough for planting out early in June. Last year I pricked the seedlings out into boxes, from which they were transferred to the beds. If I grow it again I shall pinch out the centre growth when the third pair of leaves are formed, as I believe this will make the plants more bushy, and altogether of a better form than when they are allowed to grow their own way. If not pinched they do not branch out sufficiently to cover much space.

J. C. CLARKE.

#### KITCHEN GARDEN.

##### HEAVY CROPS OF ONIONS.

HEAVY crops of Onions are objects of pride, and sometimes a source of profit to the grower, private gardeners in particular attaching considerable importance to them. This may be partly due to the fact that a good supply for home use must be maintained, and partly because no other crop shows so plainly on the surface whether or not it is a failure or success. Some gardeners who may have experienced no great difficulty in growing heavy crops are apt to undervalue what is being done by their contemporaries, many of whom find it far from an easy matter to grow Onions successfully. The seed may germinate evenly and well, or it may fail badly in places; the young plants may grow freely and strongly, or they come to a standstill and never thoroughly recover from the check. If thinning is deferred a few days too long owing to a press of other work, much harm may result from that, while in not a few cases thinning out has to be very cautiously carried out owing to the likelihood of the Onion maggot destroying the plants wholesale. Nor is this all. In not a few cases just when the bulbing or thickening of the base is going on strongly, mildew overruns the bed, and the crop if not completely spoiled is yet greatly impaired in value both as regards the weight and keeping properties of the roots. Then there is the difficulty to be faced in many backward gardens of the roots failing to mature properly, and everybody knows they must be ripened thoroughly if they are to be kept for winter and spring use.

For several years past exhibitors of Onions have been in the habit of sowing a pinch or packets of Onion seed, as the case may be, in heat in order to have a batch of plants for transplanting to the open in April. These early-raised transplanted Onions are found to far out-distance those sown quite in the open in February or March. Not only do they attain a larger size, but they also mature earlier—they never fail in this respect—and as a consequence invariably take precedence at flower shows held in August and September. Whether or not Onions sown early in February under glass can honestly be termed “spring-sown” it is no part of my business to determine. No judge would venture to disqualify them, and the practice thus condoned will always be followed. In America they have adopted the plan of raising plants in heat on a very extensive scale; it is found to be much the most profitable method of culture to pursue. If it pays well to follow the prize-winner's method in a land of bright sunshine in abundance, several acres of ground being devoted to Onions thus raised by single growers, how much more so is the practice desirable in this comparatively sunless country. Sowing the seed where the plants are to grow may seem the least laborious plan, but is it? What about the extra time that has to be devoted to thinning out, filling up gaps, hoeing and hand-weeding in the case of crops sown in the open. Then, again, sowing in heat admits of more time or affords better opportunities for getting the ground into a thoroughly pulverised state—a very important matter. Lumpy ground is about the worst that could be selected as a seed-bed for Onions, but during March the clods usually get a thorough drying from winds and sunshine, April showers completing the work of breaking them down. There is yet another point in favour of sowing under glass, viz., the great saving of seed effected. Those packets of choice or new varieties are very small indeed, and the prices in the case of older varieties are by no means inconsiderable. Sown in the open, allowance has to be made for failure, but in a moderately brisk heat seed that would fail in cold ground germinates readily enough, so that one-half less seed may be sown under glass than is necessary in the open. It may be thought that, owing to the already crowded state of the houses in most gardens, little or no room could well be spared for raising Onion plants in quantity, but this is far from being a serious objection. For instance, how much room would be taken up by six boxes each 24 inches by 12 inches? Space for this number could easily be found in innumerable early vineries, Peach houses being forced, and such-like, and in these enough plants could be raised to form in the open twenty-seven rows 20 yards long, the plants being disposed 3 inches apart, while if a distance of 4 inches apart in the row is allowed there would be thirty-six rows grown. The latter is perhaps the distance that would be most often favoured, and this means an Onion bed 20 yards by 12 yards, or, roughly, 8 rods of ground. If the latter was well prepared for the plants and what few other necessary cultural details are attended to, there should be a crop not far short of 40 bushels of sound well-matured Onions for storing in the autumn. For ordinary purposes, medium-sized to small roots are most to be desired, and planting at a distance of 3 inches apart should be most often practised. Exhibitors require extra large roots, and in this case planting from 5 inches to 6 inches apart gives the best results.

It is worthy of note that transplanted Onions, or any raised in the open during the autumn for the purpose, and also those raised

early in the year under glass, are far less liable to be attacked by Onion maggot, though they are no more exempt from mildew than are those sown in the open in March, unless early maturation can be considered a preventive. If wanted extra fine, then more than ordinary pains must be taken with the preparation of the ground. A change of site is desirable in cases where the Onion maggot proves troublesome, but successful growers of Onions use soot and artificial manures so freely, that it is not often they are much troubled by the maggot. As a matter of fact, some of the finest Onions shown in various parts of the country are grown in large quantities on the same breadth of ground every season. This site has been trenched so often and has had so much added to it in the shape of solid manure, road grit and strong composts, that it is now raised fully 1 foot above the ordinary level of the ground, and, as a consequence of this extraordinary culture, the Onions have so great a depth of rich, firm, yet comparatively warm soil to root in, that this partially accounts for the extraordinary success attending the practice. Evidently Onions require warmth as well as rich food and moisture at the roots, and if proof of this were needed I have only to refer to what is done by Mr. Smith at Mentmore. Nowhere else have I seen Onions grown on the ridges between the Celery trenches, and nowhere else last season did I see a more serviceable lot of well-matured roots. The ridges between Celery trenches will hold two rows of Onions without greatly interfering with the free passage to the trenches, and these sites could not be more profitably utilised. The least that can be done towards giving a trial to the plan of raising under glass and transplanting is to raise enough for most of the ridges between the trenches intended for mid-season and late Celery. If the work is done properly, there will be a capital lot of Onions for storing next autumn, even if the plan is tried in districts proverbially unfavourable to Onion culture. Those raised in boxes and planted out on the level should have a well-prepared site, solid manure having been dug in early in the winter, it may be with a view to sowing where the plants are to mature, though even more importance should be attached to the state of the soil as regards fine tilth. A supplementary dressing of 1 peck of soot to the rod, and forked in prior to planting, or else 2 lbs. of superphosphate of lime to 1 square rod at planting time, followed by a dressing of 1½ lbs. of nitrate of soda sown during a showery time early in May, will usually prove fully equal to promoting the growth of a fairly heavy and decidedly serviceable crop of roots. If the young Onions are somewhat drawn when the planting time arrives, shorten the tops to the extent of one-third of their length, and they will become more quickly established accordingly. Plant with the aid of a small flat or hollowed-out dibber, taking good care to spread out the roots in a natural manner instead of turning them up. They may be buried to the depth of 1 inch or thereabouts, and should have the soil pressed against the roots, a watering also being given if the soil is at all dry, while if the soil is moist at the time of planting, it may yet need watering a day or two later on. All that will be further necessary is to keep the ground free of weeds, timely stirrings with a Dutch hoe accomplishing this and otherwise benefiting the plants.

W. IGULDEN.

**Celery Leicester Red.**—There are so many kinds of Celery now-a-days, that the inexperienced are often puzzled which to choose. Were I restricted to one sort only, I would certainly prefer

Leicester Red. It happened to be employed in the garden where seed of it was sent for trial when it was first raised and before it was sent out. It was grown by the side of several of the then most popular strains. The winter was an exceptionally wet one, so much so indeed, that rot destroyed nearly all the other varieties; whereas not a single stick of Leicester Red was affected. Since then I have watched it in various gardens and in a variety of soils and found it to retain its rot-proof character. No better Celery could be grown for weight, crispness and quality, so that growers living in low-lying, wet districts would do well to give Leicester Red a trial.—J. C.

**Protecting Broccoli in frames.**—Recently some notes appeared on this, a writer remarking the best method was to take the plants up and place them under glass. For several years I have done this. The last two years I have laid them in in the old hot-bed where Cucumbers have been grown in summer. This was done about the last week in November, and now at the end of January I have some splendid heads of Veitch's Autumn Self-Protecting, enough to keep up the supply till the middle of February, when I hope to cut Early Penzance.—J. CROOK.

#### NOTES ON LETTUCE.

At this time many will be making up their seed orders, and a few remarks on the different varieties of this indispensable salad may, perhaps, be serviceable. For sowing in gentle heat now I have none to equal Early Paris Market; it has a nice sturdy habit, forces well, and forms small, solid, tender hearts of excellent flavour. Another advantage is that it may always be relied upon to come into use before those that have stood the winter are over. For succession, Veitch's Perfect Gem is really what its name implies, and stands hot or dry weather splendidly without bolting to seed. These are the only two Cabbage varieties that I grow in quantity for summer use, with Hammersmith Hardy Green for winter and spring use. Amongst Cos varieties, Paris White is a great favourite here, and preferred to all others during the past two dry summers, the hearts being large, white, very crisp, and of agreeable flavour. Paris Green is also liked, being only a little inferior to the White, but I found it run to seed sooner, and the leaves have a rather coarser mid-rib. Little Queen is a fine sort to turn in quickly and is of good quality, but here it bolts soon, and it would not do to have large quantities planted out, as many would spoil before they could be used. For winter and spring use Hick's Hardy White is a fine variety, doing particularly well on our warm soil, and is seldom injured by sharp weather. It is always ready for use before Bath Cos, a well-known and esteemed variety. I think it much better to grow only a few well-tried sorts rather than a number of untried ones that may disappoint the grower at a season when he most requires them. While growing, nothing in the garden seems to derive so much benefit from liquid manure as Lettuce: if given once a week no anxiety need be felt as to the size or tenderness of the hearts. W. G. C.

#### MARKET GARDEN NOTES.

IN walking through a West Middlesex market garden a few days since I noticed the adoption of a simple contrivance for getting some Rhubarb forward. A bed about 4 feet in width was dug out to the depth of a foot or so. The soil dug out was used to make a bank along the sides and ends, and some young Ash stakes were employed by being bent over the bed at certain distances to form an archway about 4 feet in height. Some strong roots of the Early Albert Rhubarb growing in a plantation hard by were dug up and placed thickly in the bed with soil between them, and over the roots a good covering of fresh stable manure, thick mats being employed to form a covering. With the wall of soil protect-

ing the roots at the sides and the covering of manure on the surface an early crop is certain, preceding by some days that taken from the roots in the open. In the case of the latter plantations advantage is being taken of the wintry weather to draw in the long stable manure brought from London, with which is mingled spent hops. The ground having been well cleaned over before the frost set in is now being covered with a good layer of this manure, which will not only keep the roots snug and protected during the winter, but also encourage an early growth. As the leaves ascend they carry up with them the long manure, which serves the purpose of a screen, protecting the young stalks from the cold easterly winds which prevail in March.

Green stuff of all kinds has been very plentiful during the autumn. Up to the time that the frost set in winter Spinach had been abundant, and frequent pickings were made. The effect of severe frost is to sear the leaves, but when a thaw comes with milder weather, the hearts of the plants soon become active and put forth leaves. Probably a good covering of snow would be as acceptable to the market gardener at the present time. Brussels Sprouts and Savoy Cabbages have furnished abundant supplies, and the stalks of the former are yet well finished. Savoy Cabbages have been remarkably good, but they are nearly cleared, perhaps because rain and hard frost after Christmas always prove so injurious to the crop. The earliest Coleworts came on rapidly towards maturity, though they are now receiving a check. Spring Onions promise well, though owing to the mild weather and the wet summer they have gone a good deal to neck. But the plant is a good one, and there is the promise of a glut in spring, as there was two years ago. R. D.

## GARDEN FLORA.

### PLATE 999.

#### CALOCHORTUS PLUMMERÆ.

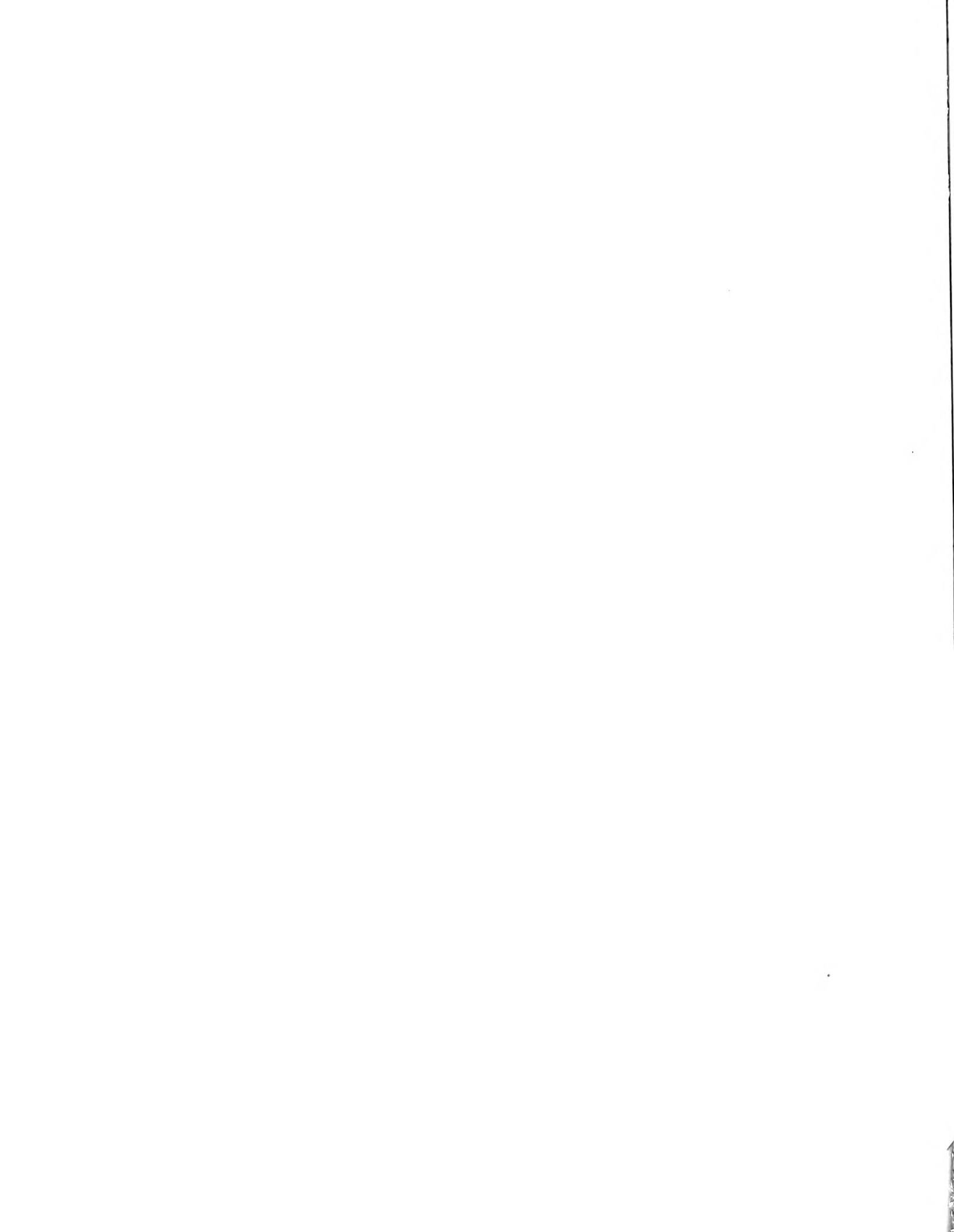
(WITH A COLOURED PLATE.\*)

THIS fine species was given the above name by Professor E. L. Greene, of the University of California. It is, however, I think, identical with *C. Weedi purpurascens*, described in Professor Sereno Watson's monograph of the genus, but was not introduced into cultivation till two or three years back, when re-discovered and named by Professor Greene. This species and *C. Weedi* are closely allied, both, like the Mexican species, having fibrously coated bulbs, which are not common to any other Californian variety. The bulbs of *C. Plummeræ* are the largest known, being upwards of 1 inch in diameter, with a very thick coat. The plant is very noticeable on account of its strong and vigorous habit. The one solitary leaf grows to a length of 2 feet by 1 inch in width, and the stout flower-stem rises to a height of 2 feet or more, carrying numerous branches bearing from ten to fifteen flowers. The flowers are larger than those of any other variety, some of those exhibited at the Drill Hall on July 24 last being 4 inches across; the base of each petal is covered with long golden hairs. The plant was awarded a first-class certificate on the above date, and though not the most beautiful of the genus, it is a fine acquisition and well worth growing on account of its large showy flowers and vigorous habit.

As previously stated in the issue of November 3, 1894, with a little care and trouble *Calochorti* may be grown in the open border as easily as the majority of hardy bulbs, and when once

\* Drawn for THE GARDEN by H. G. Moon, July 20, 1894, in Dr. Wallace's garden at Colchester. Lithographed and printed by Guillaume Severeys.





this has been proved there will be, I feel sure, few gardens where flowers are cultivated for the sake of their beauty that will not contain them.

Colchester.

ROBT. W. WALLACE.

## THE WEEK'S WORK.

### KITCHEN GARDEN.

**CUCUMBERS.**—The weather of late has not been favourable to the well-being of the winter-fruited plants, not through lack of sunshine, but owing to the harsh cutting winds. Where blinds are used for night shelter, lowering them by day as previously advised during storms of wind will have proved a boon to the plants. Avoid too hard firing, rather allowing the mercury to descend a few degrees below the regular figure, especially in houses deficient of piping. In such cases a reduction in the damping down at nightfall is advisable. If red-spider has gained a footing, the foliage should be syringed with a weak solution of Fir tree oil mixed in warm soft water over night and the scum removed in the morning. A sunny day should be chosen, that dry foliage before darkness may be guaranteed. Both bearing plants and young seedlings will soon be helped on by lengthening days and increased sun-heat, so that feeding may be practised a little oftener. Young surface roots also being more numerous, top dressings, always shallow and consisting of open loamy material with the addition of one-fourth fresh horse droppings, may be given as often as they appear. Evaporating pans charged with liquid manure, always diluted to one-fourth its strength, will further aid in warding off insect pests. Where two or more fruits cluster together, remove all but one, and fertilising at this early date will be necessary in order to avoid yellow and useless fruit. Train as much as possible on the extension system, removing only the weaker shoots that stop the ingress of sun and light, and cover the pipes where in close proximity to the foliage with coarse porous material. During absence of frost a night heat of 70° will suit fruiters, 65° being better for plants which are growing freely. In watering, let the water be soft, if possible, and apply it at a temperature of 90°. December-sown plants with the first pair of rough leaves well developed may be planted out on small hillocks of open soil provided there is abundance of bottom-heat, but where this is deficient the plants had better remain in the pots for another fortnight.

**PEAS.**—In open, light soils and in favourable districts, sowings of first early Peas may now be made. These will succeed those now coming on in pots in frames, and which will be transplanted next month. I cannot name a better selection for this date than Chelsea Gem, Exonian, and William the First, these forming a slight succession to one another. In sowing let the drills be shallow, as drought is never likely to affect these early crops, and deep sowing often ends in wholesale rotting. The distance between the rows may be about the same as the height of the variety when fully grown, but if a little more space can be given, a few rows of early Spinach may be sown between. If practicable, it is well to cover the Peas before filling in the drills with a good coating of leaf-mould and burnt garden refuse, this preserving the seed until it germinates.

**BROAD BEANS.**—The present is a good time to make a sowing in pots or boxes of some good early sort, such as Mazagan or Green Windsor. These, if brought on in a little warmth and finally hardened off in frames, will transplant well about the second week in March, and will, if then protected by Spruce boughs, come in in good time. A sowing, according to space at command, may likewise be made of Seville Long-pod, a capital Bean for following Mazagan and very hardy.

**FORCING CAULIFLOWERS.**—Where Cauliflowers are wanted in quantity in June, or where the wintered stock of Early London or Walcheren has already bolted, a sowing in heat may be made of any of the small early-maturing section, such as Snowball. If the box or pan containing the seed is stood in an intermediate house, the young seedlings will quickly appear, when they must be freely thinned and kept close to the glass for a fortnight, after which a cooler house will suit them better until large enough to prick off into larger pans or boxes. Early Cabbage, such, for instance, as Ellam's or Cocoa-nut, may be reared in the same way, as may also Lettuce if a scarcity in the autumn-planted Brown Cos batches is anticipated.

**POTATOES IN POTS.**—Where Sharpe's Victor, Ringleader, or any of the short-topped early varieties were planted in pots early in December, growth will now be well advanced. Earthing up, if not already completed, should now be done and the haulm supported by neat, stout sprigs of Hazel. A little artificial manure may well be added to the compost. Avoid shading the pots by plants or fruit trees, or growth and tubers will both alike be unsatisfactory. Beware of too much water at the roots, rather erring on the dry side than otherwise.

**PEAS IN POTS.**—The same remarks respecting earthing up and supporting growth apply to batches of dwarf early Peas sown in November and now being forwarded in Peach houses at work or similar places, elevated, of course, upon light airy shelves near the roof glass. Feeding may also be practised on a liberal scale, and where too many have been left in the pots, thinning may still be practised. Although the gatherings from these are never large, they are very useful, immediately preceding those produced in frames. On fine days Peas under glass enjoy occasionally a good syringing overhead.

**PARSNIPS AND LEEKS.**—Where these are still in their growing quarters and the ground is wanted, they had better be lifted, removed to some convenient spot and laid in to their full depth, afterwards being covered with litter. Where roots of any favourite Beet are being saved for seed, they should be clamped if this was omitted in autumn, and a good thickness of dry Bracken laid over them. A Seakale pot should be fixed at the top of the clamp, being filled with Bracken during sharp weather and kept quite clear when mild, so as to admit air and prevent the tops from growing too much.

**GLOBE ARTICHOKE.**—After the snow and thaw, stools of Artichokes must be examined, as the protecting litter is apt to become too wet and rot the crowns. Remove it and replace with fresh, using it in a rather long state. Where offsets were taken off in the autumn, potted up and stood in frames or pits, they must now be looked over, and any decayed portions removed from the base of the stem. Good coverings of litter are requisite in very sharp weather, as the tissues being very tender are easily frozen through, rot following.

**CLEANING CROPS.**—The beginning of February is a good time to go through beds of winter Spinach, picking off all dead and yellow leaves, removing any large weeds with the hand from amongst the rows, and finally putting the Dutch hoe through the bed. This will admit air and warmth and encourage fresh spring growth. Quarters of Brussels Sprouts, Kale, and Broccoli should also be gone through and all dead leaves removed from the stems. Before digging or trenching any ground it will be better to clear off any stumps of Coleworts or other greens rather than dig them in, as they often produce a colony of grubs and injurious ground insects. All Broccoli beds should be examined weekly, and leaves bent down over all forward heads to protect them from frost. Fully developed heads may be removed with the stems entire and laid in in shelter. All clamps containing eating Potatoes should now be examined in open weather, especially where frost injured any of the tubers before they were lifted from the field in autumn, or rot may play

sad havoc. Sprouts also need removing, these drawing much of the goodness from the Potatoes. Advantage of frost must be taken to wheel manure on to all vacant plots, and even on those where cutting has not yet ceased, the material being tipped in large heaps and covered with a little soil to prevent the strength escaping and also for appearance sake where in sight of the mansion. While the roads are hard, gravel should be carted home for mending kitchen garden walks, this work being pushed forward with all speed, as also the renewal and planting of Box edgings. All faulty drains in this department should also be seen to. Labels for vegetable crops must also be made, Pea sticks cut in readiness for early rows, the spray or trimmings being saved for use amongst Beans and dwarf subjects generally. Stakes for seed crops in summer should also be prepared. Home-made frames may be provided for the accommodation of successive crops of Potatoes, French Beans, and Carrots, these not necessarily having glass lights, but straw covers, to be placed over the frames at night.

**SEED ONIONS.**—These should now be closely examined, any that are likely to be too far grown by planting-out time being used in the kitchen, and the rest spread out thinly in a dry, cool, airy place.

J. CRAWFORD.

### FRUIT HOUSES.

**EARLY PEACH HOUSE.** The early trees started in November or the first week in December will now be in bloom or on the point of opening their flower buds, and if the latter, no time should be lost in fumigating. It is best to fumigate lightly two or three times in succession. The borders must likewise receive attention in the way of moisture, giving water at a temperature of 80°. Should there be any premature bud-dropping, it is wise to err on the right side and apply water freely, as doubtless dryness at the roots tends to that end. When the flowers commence opening the temperature should be raised to from 60° to 65° by day and 10 lower at night. I do not advise a high night temperature, as better results are obtained by less heat after daylight ceases. With cold winds, hail, and snow, and only fitful gleams of sunshine, airing is a difficult matter, and in large roomy houses or those constructed of iron it is wise to keep the top ventilators closed, as should the thermometer run up freely, it will do much good. Sun heat at this time of year is invaluable, and should be retained as much as possible. Syringing overhead must cease whilst the trees are in bloom, but it is well to keep the walls, surface soil and boles of trees moist by damping down twice a day in fine weather, taking care not to wet the hot water pipes in cold weather, as dense volumes of steam are harmful. I am aware some growers do not advise moisture when the trees are in bloom, but I am of the opinion that, given as advised, it strengthens the flowers and creates a sweet atmosphere. At this dull period of the year fertilisation of the blooms will be necessary. The pollen is readily transferred with a rabbit's tail. I prefer this to a brush, as it is light, and the least touch suffices to set the flowers. Many of the old varieties bloom so profusely, that it is a good plan to let the smaller blooms take their chance, as the trees always set a great number of fruits.

**SUCCESSION PEACH HOUSES.**—Where there are several Peach houses the second one is generally started at the new year, and the buds will now be swelling freely. Such trees will require ample supplies of water in the way of damping all parts of the house and the trees, using tepid water. Should the hot-water pipes be close to the trees, I have found it advantageous to cover them for a time. This covering will cause a moist atmosphere, as the heat may be slightly raised during the day, giving 5° to 10° higher than when the house was started. I do not advise raising the night temperature till the bloom begins to expand. In mild weather 45° to 50° is safe, as if at all high there will be trouble with bud-dropping.

This does not apply to sun heat. On dull cold days it is not well to exceed 50° to 55°, doing what forcing is required during daylight, maintaining as regular a night temperature as possible, as a fluctuating temperature is the beginning of the grower's troubles. Some varieties—especially the American Peaches of later introduction—drop their buds badly, and I have found a temperature a few degrees higher than advised beneficial. Now is a good time to water to assist in swelling the flower-buds. Owing to these trees blooming later there will be more sun-heat, and it is a safe plan to reduce the buds if there is a superabundance, as there will be no fear of a bad set with well-managed trees. It will also be found that the wood buds now will move very quickly, and it is a good plan to begin disbudding at the earliest moment possible.

**LATE PEACH HOUSES AND CASES.**—The work of cleansing should now be finished, even in cases, as the buds soon get injured. Should there have been any trees lifted or new trees introduced, it is well to get them pruned and the soil well firmed at the base, and as the trees rarely get too much moisture in such structures, any overflowing tanks of rain water may be made good use of by giving old or large trees a thorough soaking. The walls should be washed over with fresh lime after the pruning is completed. Should brown scale be troublesome it is well to paint the older wood or main branches before placing in position, using a thick solution of Gishurst, clay and sulphur. Many cultivators leave their trees from the wall or trellis till the last moment, but as there is so much work later on, time is saved by doing the work now, giving all the air possible to keep the trees back. Large trees which bear freely will repay rich surface-dressings at this season, using such materials as turf loam, bone-meal, wood ashes, old mortar rubble and some good fertiliser.

**HARDY FRUITS.**—Though the weather may not be all one could wish, it is necessary to push on with the work of pruning, nailing and training. In frosty weather manures can with advantage be placed in position for covering when the weather is open. It is well to remove the top surface, which is often weedy, before placing the new materials, as the borders then do not get raised too high. I have noticed this winter the borders of wall trees are anything but moist in light soils, and as there is often liquid manure running to waste at this season, this may be given to such as Apples, Pears, Cherries and Apricots. To prevent the manure, which may be thick, leaving a deposit on the surface, I have found it a good plan to remove the surface soil before applying the same, this assisting the liquid to reach the roots more readily, the soil being replaced when the watering is finished. Doubtless the summer of 1893 dried the soil so much that the moisture has never got under large trees with fibrous roots, so that the food given now will be beneficial. Apricots with their roots near the surface, also Cherries, are gross feeders. I do not advise giving liquid manure to trees in bloom; it should be done after the fruits are set. The covering of whatever kind should be got ready for Apricot trees, which will soon be showing their flowers. I prefer such a covering as will admit light and not weaken the blooms. A temporary coping is of great benefit; indeed, I have more faith in an efficient coping than any other protection. The next trees needing attention are Peaches and Nectarines. These should be pruned at the earliest date possible, and the walls cleansed previous to nailing. For this purpose I use soluble paraffin and warm water. Ordinary paraffin is soon prepared by thoroughly mixing with soft soap, and when mixed adding warm water. Should the trees be dirty, now is a good time to cleanse them, washing first with strong soapy water, and painting as advised for indoor trees. I do not advise re-nailing Peach trees till the last moment, as if kept from the wall the buds are later. It is well to fasten the leading branches securely to prevent damage by winds. When the pruning and nailing of wall trees are finished the borders should receive attention.

These are often neglected if left till the busy season. Before giving these aids it is well to examine the soil and see what condition the roots are in, as if far down they do not reap so much benefit from surface-dressings. In such a case I would advise removal of a few inches of top soil or going down to the roots and placing the manure over them, giving a covering of soil over the manure. Fruit trees in the open may be top-dressed, and Pears if strong well repay for liquid manure should there be any to spare. To get the most value out of the liquid give a dressing of short manure on the surface previous to applying the food. Any old beds, such as Cucumber or Melon beds, are useful for this purpose if better manures are not available.

G. WYTHES.

## GARDEN SKETCHES.

### CHAPTER VIII.

"The coming Musk Rose full of dewy wine,  
The murmurous haunt of flies on summer eves."  
MILTON.

**JULY 1.**—At last delightful showers have fallen by day and night. The hot and dusty air has become fresh once more. Raindrops lie hidden in the Rose petals and tremble on the Lilies' verge, and are folded in the shining leafage; the pent-up fragrance is set free again, and the incense of the flowers ascends with the breath of morn and floats in the evening air. Nature is indeed rejoicing, and so are they who feel her every mood.

It is the time of Roses and Lilies. The pure Madonna Lily (*Lilium candidum*) is not happy with me, planted no doubt in a too-shaded spot. I have noticed it lately full in the mid-day glare, in cottage gardens alongside the hot and dusty roadway, blossoming in splendour. *Lilium testaceum* seems easier to satisfy, and is a most stately flower when grown in large clumps. Just at present it has a charming setting, as one passes along the herbaceous border, for the fairest of blue Delphiniums is towering by its side. Elsewhere a tangle of faint blue Cornflowers is caught among its stems. I find this Lily equally content in sunshine as in shade. The white Rose of Provence is not a robust grower, but its blossoms have a fragrant delicacy of texture and a milky whiteness that are quite unique, and are well worth any extra care bestowed. The China Roses are now flinging wide their floweringsprays. Fellenberg is a particularly vigorous variety. Cramoisi Supérieur is more single, but its crimson is so intense as to make it a most striking Rose. The white China Rose, Rival de Pastum, is alike exquisite in blossom and foliage, and we may well believe that this was the Rose mentioned in Virgil's writings. Cuttings of these old-fashioned Roses when taken now strike freely under a bell-glass in some half-shady spot. Many such that were made just a year ago are showing blossoms now, but I have had them nipped off so as to throw the strength of the plant into the formation of fresh shoots that later on in autumn may be allowed to flower, the great charm of these China Roses being their fearless blossoming until cut off by the frosts of winter. The success of Rose cuttings seems chiefly to depend on their being planted in the ground two-thirds of their length, and then pressed in as firmly as possible, a portion of ripened wood at the base being, of course, necessary in the first instance.

**JULY 17.**—St. Swithin's Day came with clouds and showers, and now we have rain with thunder and sweeping winds. This morning there was a Rose-leaf storm in the garden, when the crimson petals were torn from their stems and whirled high against the inky rain clouds

beyond. The Iceland Poppies are very gay at present in all their shades of orange-red, bright yellow, apricot, and pure white. An entire bed of them open in the sunshine and nodding together in the light summer wind will give brilliance to whatever spot they may be in. They are excellent for indoor cutting arranged with their graceful buds in amber glasses and the light *Gypsophila paniculata* (which I call Sea Spray) used to support them, their blossoms gleaming brightly through the delicate flower mist that surrounds them. The old plants are of little use, so they are grown as annuals each year. The flowering sprays of another plant—*Heuchera micrantha*—hold blossoms together very lightly. Seen in the distance when growing the tall stems are beautiful caught together in a red misty tangle of some hundred sprays, that when gathered form a delicate support for bright blossoms such as the summer Gladioli, that always tumble aside in a vase of any width, or the yellow *Oenothera Fraseri*, with its slender crimson stems and buds. *Stenactis speciosus* has great staying power, and so is a valuable border plant, its oval green eye set in the fringe of amethyst petals making it distinct from the Michaelmas Daisies. Storm and rain do not injure it. Let but the sun shine out, and it is quickly dry and bright again after its rain bath. Frequent root division makes it more vigorous.

Among shrubs in blossom, *Escallonia Phillipiana* is one of the most charming. The slender arching branches are clothed with small white blossoms, so that they look as if set with pearls and render it quite distinct from the other varieties. It has not the rapid and somewhat coarse growth of *Escallonias* in general, and so is fitted for choice positions. The large trees of *Berberis Darwini* that were golden bushes in spring-time are now nearly as beautiful in their summer apparel of deep blue, every branch being completely draped with fruit like fairy Plums, with the delightful bloom veiling the rich hue beneath. The starlings sometimes light on them for a morning feast, but as yet they are untouched by the blackbirds and thrushes, which are still occupied with the yet lingering Currants within the garden walls. Long branches of these blue berries, set in brown jars with stems of *Moutbretias*, are our prettiest indoor flower group. Since the drought ended, *Zenobia pulverulenta* has made rapid growth and is sending up fresh tinted shoots from the base. The leaves are of a lovely pale blue-greyish hue, shadowed as if with crimson, and the pure white flowers, set in loose clusters, are like Lily of the Valley and droop in little waxen bells from beneath the leaves. A peaty soil and half-shaded position suit this American plant. It is not of the hardiest of shrubs, but it is one of our most precious. *Cassinia fulvida* is overpowering in its smell of honey, but is very pretty in its early flowering stage; and later on, if the flower-heads are clipped off when they turn brown and musty, the shrub will be restored to its golden hue. This season I notice round the base seedlings springing up, having lain dormant since last year. During the last few weeks the white pendent plumes of *Spiraea arifolia* from a few stems some 8 feet high have been lovely seen against the blue hills beyond. Even in winter, after the leaves have fallen, this *Spiraea* is of value, for the flowers, though brown, yet linger on the stems, and the whole plant makes a light and graceful tracery cast up against the distant landscape. *Spiraea palmata* and its white variety make a fine group side by side in the rock garden. The blossoms of the latter in its delicate sprays when just opening are like seed pearls. The crimson stems and



rose-pink flowers of the former make it very attractive, and even when the flowering is past the light network of seed vessels makes it still pretty. As the Spiræas are plants of damp meadows, they enjoy moisture, and Spiræa palmata is always seen at its best by a stream-side or bank of a pond. S. Bumalda is a slender rosy shrub of rapid growth. S. crispifolia, with its deep pink blossoms, has been a bright bit of colour for some time beside a grey rock. It is a compact bush, increasing very slowly in size.

The blossoms that come and go day by day have generally beautiful seed vessels, so that the plant when it has shed its petals of the hour seems none the worse, but, with fresh swelling buds, awaits the dawn to be reclothed. This is especially noticeable in the Cistus family. Robed in the morning with fluttering blossoms not yet free of their crimping bud folds, at evening's close they lie scattered on the ground beneath, while the tree, free of any withered bloom, stands erect with shining leaves and red-brown buds, that hold the satin petals and the capsules from which they have just fallen, clustered together to await the coming day. Cistus florentinus, amid a tangle of Rock Roses of varied tints, has been beautiful, they, too, letting drop their coloured banners at close of day.

JULY 25.—Is there anything more powerful to recall the days gone by than the scent of flowers? The garden is spicy now with the perfume of Carnations, Mignonette, and Sweet Lavender. The last brings back to memory an attic under the eaves of an old dwelling, where the blossoms were spread out to dry in the long summer days, afterwards to be enclosed in muslin bags and laid among the folds of snowy linen, and many a day have I climbed to that sunny chamber to strip the blossoms from their stalks, and listen to the swallows twittering on the house-top, and the cooing of the wood-queens in the tall trees close by, and to watch the peacocks from the little window strutting up and down in front of the long turf shed.

With the perfume of Carnations return to memory the Peaches gathered from the southern wall of my old home, where they ripened when the Carnations were in bloom, and many a one was eaten in the warm scented air of a summer evening, while the Carnation blossoms lay in masses, touched to richer glory by the sunset hour. Carnations are so much better from young plants that the layering of them should never be omitted during this month, for the young plants are then ready to be moved in September, and thus have time to become established before frosts begin. Slips and pipings can also be made in any shady spot. These latter are not generally sufficiently rooted to move before the following April. This season the Carnations were so much affected by the purple fungus that appeared in blotches over the leaves, that I threw out all those in the fountain garden, removed the soil from the beds, replaced it with some fresh loam from pasture land, added some leaf-mould and replanted with cuttings of last year, which have grown apace. This purple stain on the grass is the Carnation's cholera, and so infectious, that it is death to the plant unless each leaf is removed as soon as the disease is apparent on it. The old Clove Pinks—the sweetest of all—are especially liable to this complaint. Since moisture has returned the Montbretias have made rapid growth and give a delightful glow of orange-red in the rock garden. M. crocosmiellora is not so tall or leafy as M. Pottsii and flowers more freely, the blossoms

outstripping the foliage and being larger and more brilliant. The beautiful arched purple stems are many-branched, and beaded their entire length with flower-buds opening gradually from the base upward. No withered bloom is ever visible, as, perfection past, they drop one by one to mother earth, leaving the crimson-sheathed seed-pod. The Montbretias delight in a moist atmosphere and soil, and where these can be found they are among our most valuable autumn plants. When the clumps become too large they can be dug up in spring and torn to pieces, the larger bulbs being replanted and the remainder thrown away if not required. The spiny-leaved Eryngiums have been beautiful all this month, especially E. amethystinum, with its crown of red-admiral butterflies. Each sunny morning brought the fluttering, dazzling wings to lie expanded on the blossoms, the insect intoxicated either by its scent or its nectar into stillness. I have counted as many as nine of these butterflies on the plant at the one moment. E. alpinum in like manner attracted the wild bees, and so overcame them with its essence that they could be calmly lifted off the flower-heads and laid in one's hand, there to reel and stagger in the most drunken manner for about one minute, after which they would fly away, mounting high into the air. L. A. L.

(To be continued.)

## ROSE GARDEN.

### WINTER ROSES.

LECTURING to the Horticultural Club on the odour of Roses at the Hotel Windsor on December 11, I embraced the opportunity of noting the winter Roses in the markets, shops, and streets. The facts gleaned in such quarters could hardly be said to be encouraging to British trade. The bulk of the December Roses in London were of French or foreign growth, and they consisted chiefly of Mme. Falcot and Isabella Sprunt, with a few Safrano and l'Idéal. There were also a few English grown Roses, but while these were comparatively few and far between, French Roses, consigned in boxes of 100 each, may be said to have furnished the markets and overflowed into the streets. In front of the Royal Exchange and Liverpool Street Station these French Roses had also more colour than English ones of the same sort, and, being massed in hundreds, added to the colour which the Roses presented in single file hardly possessed.

The flower girls in the street were not slow to add to the colour of their Rose-buds. The purple glow of the foliage of some of our Teas adds greatly to the effect of the half-opened buds, hence to increase the body of purple foliage in contrast with the Rose-buds of cream or gold, not a few of these clever mounters had worked in one or more glowing crimson leaves of Berberis Aquifolium with the all too scant leaves of Mme. Falcot. There was, however, a striking lack of white Roses in the metropolitan streets and markets a fortnight before Christmas-tide, and surely it is not beyond the ability of our English growers to flood the markets with home-grown Niphotos Roses for Christmas as liberally as they are supplied with foreign Roses, Camellias, Azaleas, Lily of the Valley, Arums, Roman Hyacinths, and Tulips. I am glad to note that "U. S." has faith in Niphotos for winter work. I go further, and would challenge any Rose grower to name a white Rose that can equal Niphotos for quantity and quality at any season under glass. D. T. F.

**Imperatrice Eugénie** is the name given to three perfectly distinct Roses. M. Guillot sent out a Perpetual Moss under this name in 1856;

one year after M. Beluze introduced a Bengal variety, and three years before M. Oger sent out a Hybrid Perpetual. Such confusion is caused by this multiplicity of names that a trade grower is often accused of substituting a variety when in reality the only error was in not knowing for certain which class or section of Rose was alluded to. There are many similar instances to the above, and much unnecessary annoyance is caused by this careless naming.—R.

**Mme. Georges Bruant**, one of the hybrid Japanese Briers, resulted from crossing Rosa rugosa with Sombreuil, and partakes of the characteristics of both—almost pure white and semi-double. R. rugosa alba is a perfect single white; Sombreuil is very thin and of lemon-white shades. The result is a vigorous grower with a long bud and of truly perpetual-blooming nature, with much sweeter perfume than in the ordinary Rosa rugosa.—R.

**Moss Rose Cristata**, sometimes called Chapeau de Napoléon, and at others Crispée, was sent out almost seventy years ago, and if one gets hold of the true variety it is still the best crested pink of this class. It should not be confounded with the common Moss Rose, although both are very fragrant and somewhat similar, but Cristata is a much newer production and more mossy. Both are only moderate growers, best on their own roots, and need rather hard pruning.—R.

**The old Cabbage or common Provence Rose**, known in this country for almost three centuries, is still grown around London beneath fruit trees. It supplies a large number of partially crested buds, which when cut young are almost like the Mosses and very sweet-scented. Not a vigorous grower, but when on its own roots and allowed to sucker at will, it is long-lived and hardy. There are several home and Continental names for this old favourite in addition to the above—R. d'Hollande, R. hortensis, R. de Chou, R. centifolia communis and others.—R.

**Rose W. A. Richardson for exposed places**.—This Rose has a grand constitution. It grows and blooms most freely here on its own roots in bush form fully exposed to the eastern gales, continuing to flower late into the autumn. Whether grown on a wall or in the open it must not be cramped for room, neither must it be over-pruned. The weaker growths, especially those from the centre of the tree, should be duly thinned and the head generally balanced, but nothing further. It succeeds well here on a comparatively light soil, which is an additional good trait in its character.—A. C., Newark.

## ORCHIDS.

### NEWLY-IMPORTED ORCHIDS.

IN forming or adding to a collection of Orchids many people prefer to purchase newly-imported plants, and there is much to be said in favour of this. There is, of course, always a chance—if a remote one—of obtaining something new amongst a lot of Orchids that have never flowered under cultivation. But there is a much greater advantage in the way imported Orchids of all kinds grow away when introduced to a suitable atmosphere. It has often been a matter of wonder to me to see Cattleyas, for instance, recover so quickly when badly shrivelled on the journey home, while if the plants had got into such a bad way under cultivation, no amount of skill or care would have been effectual in bringing them round. There is, in short, an innate vigour in Orchids fresh from their native habitats which in many species is gradually lost under cultivation even with the best care. In selecting plants from an importation, those should be chosen that are quite dormant, with, if possible, healthy leaves, firm at the axils and fairly large, as represen-

tative of the different species. An *Oncidium* or an *Odontoglossum*, for instance, with eight or nine good pseudo-bulbs, is preferable to two plants with half that number each. When the plants arrive, the first thing necessary is a thorough and careful cleaning of all parts. All decayed pseudo-bulbs, roots or leaves must be cut clean away with a sharp knife. If only a few plants are being treated, they may then be laid upon pans filled with clean crocks, and placed in a shady position in a warm house. Where there is a considerable number a piece of stage should be given up to them, the plants being laid out thinly and sprinkled lightly with tepid water daily. If more convenient they may be suspended head downwards from the roof, and this is perhaps the most suitable treatment for *Aerides*, *Vandas* and others which, from their habit of growth, are apt to collect water in the axils of the leaves and the apices of the plants. As soon as they are showing signs of life by pushing new growths or roots they may with safety be potted, blocked or placed in baskets, as may be necessary. It is important that they be not left until the roots are far advanced, or some of these will probably be broken off in potting. The ordinary compost as recommended for established plants of the various kinds will be suitable, but it is safer to add more small crocks and charcoal, so as to ensure a quick passage for water. The plants may also be elevated rather more than usual. Great care must be exercised after potting and while the young growths of the pseudo-bulbous kinds are pushing. A little too much water, cold drip from the roof, or even an hour's exposure to bright sunshine will often cause the loss of these tiny shoots, greatly to the detriment of the plants, as back breaks are never so vigorous as the leading shoots. *Cypripediums* are easily established by potting them at once in clean crocks alone, watering them twice daily until new roots are forming, and then giving a little peat and Moss. *Phalenopsis*, too, may be successfully treated in this way, but these are best without anything in the way of compost for the first year, or with only a little fresh Sphagnum Moss to retain a certain amount of moisture. The plants must not be allowed to bear many flowers at first, even if they show, or the strongest ones will be weakened at the outset. It is a good plan with *Odontogloss* and others which produce many-flowered racemes to remove all but one or two of the flowers the first season. This will be quite sufficient to see what the variety is like, but even these must not be allowed to remain on the plants until they fade. H. R.

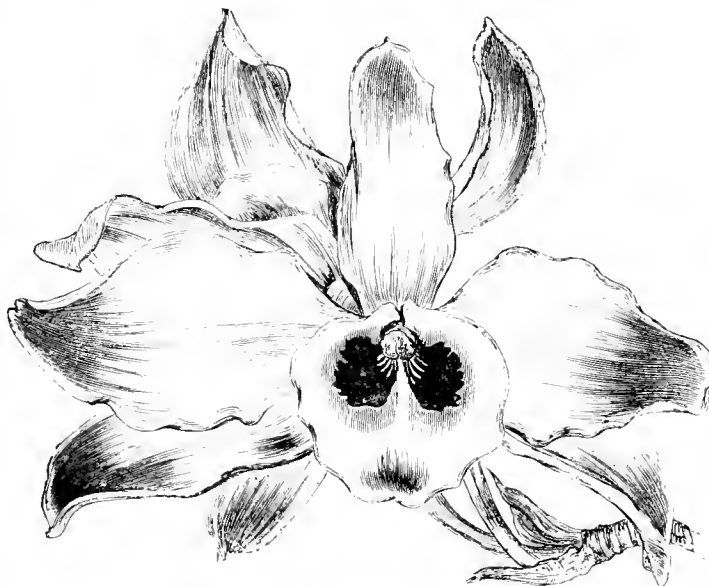
*Cattleya blenensis* is a charming little hybrid between *Cattleya Loddigesi* and *Laelia pumila*, in which the two kinds are admirably blended. This is at present flowering with Messrs. Williams and Son, of Holloway. It is of dwarf habit, the flowers large and of good form, the sepals and petals deeply flushed with rose. The lip, resembling that of *Laelia pumila*, is white on the side lobes, the front lobe being of an intense bright crimson-purple.

*Cycnoches peruvianum*.— This was included in the group staged by Messrs. F. Sander and Co. at the last meeting of the Royal Horticultural Society. The plant carried a raceme of several blooms, which were in size, shape and colour very similar to those of *C. pentadactylon*. The colour was a greenish yellow, spotted with reddish brown, whilst the peculiarly formed lip was white and the long arching column very prominent. A few of the species belonging to this genus are especially interesting, and are not difficult to manage provided they are treated in a proper manner. Whilst in active growth the *Cycnoches* enjoy tropical heat and plenty of

moisture both in the atmosphere and at the roots, but when the growths are complete, a cooler and drier temperature will be found to suit them best. At this time care must be taken with regard to watering.—G.

#### DENDROBIUM WARDIANUM.

This is a magnificent Orchid, which from the present time onwards will make a brilliant display. This species is annually imported in enormous quantities from India, some coming from Assam and the Khasia Hills and others from Burmah. Those from the latter district, however, have longer stems and larger blooms than those from the first mentioned, although the most highly coloured varieties appear to have originated amongst the shorter-stemmed plants from the Assam district. *D. Wardianum* was named in compliment to Dr. Ward, of Southampton, with whom it flowered soon after its introduction. It first bloomed in the Kingston Nurseries, but this plant was thought to be a variety of *D. Falconeri*, which it somewhat resembles, especially in the formation of the



Flower of *Dendrobium Wardianum*.

bulbs. The foliage falls off annually and the flowers appear in twos and threes from the joints of the leafless stems at the present season. The individual blooms often measure between 4 inches and 5 inches across and last a considerable time in perfection if kept dry. The sepals and petals are white, mostly tipped more or less with magenta-purple, and, as before stated, the smaller blossoms have the richest colours. The lip is broad and remarkable for its fine colour, being bright yellow on the disc, tipped similarly to the sepals and petals and having two large maroon blotches at the base, one on each side. In Messrs. Williams and Son's nursery at the present time are numerous forms in flower, some having the sepals and petals almost pure white. The variety named *D. Wardianum candidum* is an exceedingly rare form with pure white blossoms, excepting a yellow stain on the lip and two light reddish-coloured spots at the base. It was introduced with the original importation from Burmah by Messrs. Low, of Clapton, and first flowered in the Broad Oaks collection at Bury, in Lancashire. *D. Wardianum* enjoys plenty of heat and moisture when in active growth, but after this is complete a decided rest is necessary to ripen the bulbs and to produce

plenty of flowers. It appears to succeed best when grown in baskets and suspended near the glass, and should be potted in a compost of good peat and Sphagnum Moss, with good drainage. Having long pendulous bulbs, care should be taken to fix the plants firmly when potting, so that they do not rock about in the baskets, for if left in this condition they cannot root into the soil and become established. This charming Orchid is admirably adapted for cutting.

WM. HUGH GOWER.

#### LYCASTES.

AMATEURS and others commencing the culture of Orchids could hardly find a more suitable genus than *Lycaste* to begin with. None are easier to grow, and all of them are free-flowering and handsome plants, most of the species being also very cheap. Although they all grow with more or less freedom in the cool house, better results will be attained by giving the plants a little more heat than *Odontoglossums* and other cool house Orchids require. Shade from bright sunshine is also necessary, and an

airy, moist atmosphere at all times, except while in flower, when they must be kept drier. *Lycastes* are easily propagated by division of the plants, *L. Skinneri* being especially amenable to this treatment. They are best grown in pots, which must be clean and well drained, and the compost may consist of lumpy peat, chopped Sphagnum, and finely-broken crocks, with a little fibrous loam added for the stronger growing kinds.

The plants require an abundant supply of water at the roots during the growing season, and even when at rest they must not be allowed to get quite dry. *Lycastes* are often attacked by a soft brown scale, and sometimes by red spider if the atmosphere is at all dry.

These must be kept in check by frequent syringings with warm soapy water, care being necessary in the operation to avoid puncturing the somewhat tender foliage.

*LYCASTE SKINNERI* is the best known in the genus, and one of the most useful Orchids in cultivation. This species has many varieties, the typical flowers being bright rose on the sepals and petals, with crimson spots on the lip. By having a sufficient number of plants and growing these in slightly different temperatures, this Orchid may be had in flower for at least five months. Occasional applications of weak liquid manure are helpful during the growing season, first watering with clear water to ensure its proper distribution. The variety *alba* is wholly white, with the exception of a yellow stain on the lip. Other varieties are *debeatissima*, *nigro-rubra*, *rosea*, *purpurea*, *superba*, &c., the names of these being descriptive of their variations from the type.

*L. AROMATICA* is an extremely free-flowering species, the blossoms being very fragrant. The pseudo-bulbs are ovate, about 2 inches high, and bear two or three broadly lanceolate, plaited, light green leaves. From the base of these the single-flowered scapes are plentifully produced. Each flower is upwards of 2½ inches across, bright

golden yellow, sometimes spotted on the lip with orange-red. This species flowers at midsummer, and lasts a long time in perfection.

*L. DEPPEI*, like the preceding, deserves more attention from growers than it receives. It is similar in habit to *L. aromatica*, but the flowers are larger. The sepals are greenish yellow with abundant purple spots; the petals pure white, and the lip yellow, spotted with crimson. The variety *punctatissima* is larger than the type and a superior Orchid. The blossoms are thickly covered with purple spots and lines.

*L. HARRISONI* is a beautiful species, and quite undeserving of the neglect into which it has fallen. This frequently produces twin-flowered scapes, each flower being about 3 inches across, very thick and fleshy in texture. The ground colour is creamy white, the lip yellow at the base with purple markings. This species was referred to *Bifrenaria* by Reichenbach, being slightly different from the other kinds in habit and the formation of the flowers. This and its variety *alba* are natives of Brazil, and require more heat than the other species.

*L. LANIPES* is one of the freest flowering Orchids in existence. It is a strong grower, having pseudo-bulbs 4 inches high and leaves 18 inches in length. The scapes are one-flowered and produced in autumn. They are not very showy, being principally of a greenish white, but the fact of their lasting so well when cut is a recommendation.

*L. PLANA* is a bright and showy species and a winter bloomer. The flowers are  $3\frac{1}{2}$  inches across with bright red sepals, the petals being white, with a blotch of crimson upon the tips; the lip is roundish in front, white, spotted with crimson. This has several varieties, including the comparatively well-known *L. plana Measuresiana*, but most of them are very rare. H. R.

*Oncidium splendidum*.—This magnificent Orchid has by some authorities been classed as a variety of *O. tigrinum*, to which in the flowers it bears a strong resemblance. In habit, however, it is so entirely different, that it is difficult to believe the two in any way related. The roundish pseudo-bulbs and the thick leathery leaves of *O. splendidum* are bronzy and rough in appearance, and the spikes are produced from the base of the former. On strong plants these are frequently 30 inches in length, sometimes 3 feet. They are branched and bear a large number of flowers. The compost for this Orchid must be very free and open, as it abhors anything like closeness about its roots. I have found it do well in pots or shallow pans in equal proportions of peat fibre and Sphagnum Moss, with a free admixture of clean crocks. The pots must be exceptionally well drained, a good deal of water being required while the plants are making their growth. It must be kept well up to the light at all times, and while the pseudo-bulbs are maturing be fully exposed to the sun. The water supply must not be lessened until the bulbs have quite finished swelling, or weak flower-spikes will be the result. This is an important point too often lost sight of by growers. If they would only watch the roots of this and other Orchids during this period, and note how actively these are searching for nutriment, it would prove an instructive object lesson. Very little water is required during the early winter months, increasing the supply as the spikes develop. *O. splendidum* thrives best in the *Cattleya* house all the year round.—H. R.

*Sophranitis violacea*.—This pretty little species is not often seen in flower, and although lacking the showiness of some of the varieties of *S. grandiflora*, the flowers have nevertheless a peculiar charm. The colour is a soft purplish rose, and the blooms are produced on single-flowered scapes from the apices of the small oval pseudo-bulbs. A plant of this species was in flower recently in the collection of Captain Greenwood, of Harnham Cliff, Salisbury, where it is grown on small trellised blocks in the *Cattleya* house. It is

important that these small-growing species be kept in an atmosphere free from fluctuations of heat or moisture, or they cannot possibly thrive, the plants often becoming the prey of scale and other insects. *S. violacea* is a native of Brazil, whence it was introduced in 1840.

*Dendrobium Ainsworthii*.—This is one of the most beautiful of hybrid *Dendrobies*. The plant in growth and habit resembles *D. nobile*, one of the parents, the other being *D. aureum*. It usually flowers about the present time, and continues during February and March. The sepals and petals are creamy white, flushed with rose at the base, whilst the lip has a large central blotch of bright amaranth-purple, with numerous radiating lines of the same colour. The flowers are also sweetly scented.—G.

#### DENDROBIUM NOBILE.

I NOTED the remarks on this useful old Orchid at p. 15, and can confirm what "W. H. G." says of it. I had a large specimen plant which flowered annually at Christmas. One year it was particularly well flowered, and I counted 1400 blooms on it. This happened twenty years since, and the blooms at that time were worth 3s. per dozen. The plant was broken up into a score of smaller pieces, and I have them now, but instead of having one plant in flower at Christmas I have two or three smaller plants, and a succession of bloom is kept up until June. In fact, I have had specimens from that same plant in first-prize collections in London in that month. This is evidence of the vigorous constitution of the species, for this collection of a score of specimens was one small plant in a 5-inch pot thirty-two years ago when I took charge of it. There are other *Dendrobiums* quite as beautiful or even more so, but none of them would stand culture of this kind and increase to the same extent. The idea still exists, not only amongst amateurs, but even amongst gardeners, that it is necessary to have a special Orchid house before any Orchids can be grown. I can remember the time when Orchid houses were practically unknown, and yet what fine specimens were grown of this *Dendrobium*, *Cattleya Mossii*, *Laelia purpurata*, *Phajus grandifolius*, &c., with little aid except the vineries or other forcing houses.

*Dendrobium nobile* requires a growing season, when the temperature must be high to obtain good results, and after that a time of rest. The plants flowering at Christmas should be placed in a temperature of 60° to 65° as a minimum as soon as they pass out of bloom in order to get the growths matured early, and as the succession plants go out of flower they must all pass through the same treatment. All that the gardener has to do is to keep them well supplied with water and in a moist atmosphere while growing. If they push out growths and roots freely from the tops of the stems it is a sign that something is wrong with the roots; either they are not receiving enough water, or the roots have got into bad condition by the decay of the potting material. It is a good time to re-pot any plants that need it when they pass out of bloom, but do not over-pot. This is an error which many anxious cultivators are liable to commit. The pots are filled nearly half-full of large pieces of broken pots, well placed; over the drainage I place a layer of Sphagnum Moss and complete the transfer of the plant by getting it out of the old flower-pot with as little injury to the roots as possible. When the roots have laid hold firmly of the inner surface of a flower-pot it is better to break the pot to pieces and remove it bit by bit than destroy half the roots. The compost should be fibrous peat torn to pieces and the finer particles sifted out; add to it a liberal proportion of freshly-gathered, cleanly-washed Sphagnum Moss and clean potsherds. Pot firmly and always raise the plants above the surface in the form of a cone. This is the treatment most of the *Dendrobiums* receive, from the small-growing species with stems an inch high to the more gigantic specimens, such as *D. Dalhousianum*,

with 6-foot stems. Some, of course, do better in baskets; indeed, most of them will succeed as well in baskets as in pots. The best grown plants of *Dendrobium nobile* I ever saw were in the garden of Viscount Portman, Buxted Park (gardener, Mr. Prinsep). The plants are cut down annually, and each year new growths are made, all the flowering growths being cut away. Those who try this plan must remember that this *Dendrobium* makes its growths one season and the flowers are produced from those growths the following year. All Mr. Prinsep's plants were grown and flowered in large teak baskets.

J. DOUGLAS.

*Calanthe Textorei*.—This fine species belongs to the *veratrifolia* section. It is an evergreen plant, and will succeed in a much cooler temperature than the deciduous kinds. It should be grown in large pots and given plenty of water whilst in active growth. The flowers, produced on a stout erect scape, which grows to a height of from 18 inches to 2 feet, are pure white, the petals and lip being shaded with pale mauve when first expanded. This plant is a native of Japan, whence it was imported about eighteen years ago by Messrs. Veitch, of Chelsea.—W. H. G.

*Sophranitis grandiflora*.—I have noted this plant flowering well in many collections during the winter, especially in the neighbourhood of London. Its bright scarlet blossoms make a striking and pleasing contrast to those of other Orchids which may also be in bloom. It may be grown either upon a block of wood or in a small basket, but the best results I have noticed have been where shallow pans suspended close to the glass are used.—W.

#### LAELIA SUPERBIENS.

This is a noble species when well grown, and although small plants do not as a rule flower freely, when once these attain a good size there will be no cause for complaint on this score. The pseudo-bulbs are each about 18 inches in length and bear on the apex a pair of deep green leaves. The spikes proceed from between these, and are each from 4 feet to 5 feet in length, although naturally they are said to grow to 10 feet or 12 feet. The flowers occur in loose umbels on the tops of the spikes, as many as sixteen not being uncommon on strong plants. The sepals and petals are rosy-pink, the lip deeper in colour, streaked with golden-yellow. *L. superbians* requires liberal treatment to grow it well. The pots should be large enough to take the plants easily, as the roots are strong and seem inclined to ramble in search of nutriment. The compost should be open, but substantial, and I have had good results from the use of partly-decayed leaf mould in equal proportions with peat, broken into lumps as large as a walnut, and Sphagnum Moss. Plenty of charcoal must be added, and if it can be procured, some rough pieces of burnt clay or ballast, as it is termed at the potteries. This material is very suitable for use in large pots or baskets, as it is very porous and not so liable to injure the roots as the sharp-edged potsherds. This species enjoys a slightly higher temperature than most of the genus, and does well in the company of *L. purpurata* and others in a spacious house where plenty of head room can be afforded it. It will not thrive in a low, close structure with its head nearly touching the glass. Sometimes, owing to the vigour of the leading growths, large plants get bare towards the centre, and when this is the case the rhizome should be notched half way through between the second and third pseudo-bulbs in order to induce the dormant eyes to start into growth. This improves the appearance of the plants without in any way interfering with the full development of the leading growths, which if the rhizome was cut right through would probably sustain a severe check. *L. superbians* is a native of Guatemala, where it was discovered more than half a century ago by Mr. G. Ure-Skinner.

## STOVE AND GREENHOUSE.

## THE CHIMNEY BELLFLOWER.

(CAMPANULA PYRAMIDALIS.)

This handsome species of the Bellflower family is a European plant, having been introduced into this country more than 350 years back; hence it is fully entitled to be classed as an "old-fashioned plant." It stands out still as one of the very finest of its race in every respect, being an easy plant to grow, a most prolific flowerer, and a very showy one when in bloom, lasting also for a length of time in that state when well managed. The culture of this *Campanula* was probably more popular before glass houses came so much to the front, being a subject easily kept through the winter with a little protection if possible, it being certainly more secure if this be accorded, although in favoured positions it may be wintered in safety on sheltered borders. It is, however, as a cool greenhouse or conservatory plant that its beauties are brought out in their best character, and as such it can be recommended for extended cultivation even in these days, when other attractions are much more numerous than of yore. The subject of the illustration is an example of what may be accomplished under good culture, thus making essentially a specimen plant of no mean attractions. It is taken from a plant of the pure white variety with larger flowers than usual. For quite cool houses of any aspect the Chimney Bellflower can be strongly recommended as a most useful flowering plant, coming into bloom about the middle of July and lasting until the end of September. I have had the same plants good for this period by continuously picking off the seed-pods; unless this be followed up the later flowers will not develop, as all the strength seems directed towards the swelling of the seed-vessels. At the base of the stalk of each flower others in the embryo stage may be noted, and these will be repeatedly reproduced until the plant is finally exhausted if the seed-pods are not allowed to swell. Honey-bees are particularly fond of this *Campanula*. I have noted them by hundreds very busy at work; hence probably more pods swell than would otherwise do so. There are various modes of

## CULTURE

that can be adopted according to circumstances. If plants of large size be wanted, such as will produce from fifteen to twenty or more spikes, these reaching a height of 7 feet or more, then it is best to sow the seed in August in a cold frame and winter the plants afterwards in 3-inch pots, these being potted about the following March into one or two sizes larger, according to their vigour. Early in the summer another shift should be given

them, and early in September the final or flowering shift, which, in the case of strong plants, will be 10-inch or 12-inch pots. I have seen them in larger pots, but the gain does not correspond with the amount of labour expended. These sizes are quite large enough for wintering the plants in in cold frames; larger would be cumbersome. These plants will be fit for standing

gentle warmth, gradually hardening off, until cold frame treatment will suffice when well established after pricking off. These plants should not be stood out-of-doors fully exposed until established in 4½-inch pots, and then it will be better to plunge them, so as to avoid any undue amount of watering. These plants will take two shifts before the following winter if well cared for. In any case a late shift should not be given, otherwise the plants will not have time to re-establish themselves before winter. I much prefer to give the final shift in the autumn, but if room for storing in cold frames be limited, then the final shift may be given when the plants are stood outside in the spring. From the time of seed-raising onwards avoid overcrowding, pricking the seedlings off for the first time, as in the case of Celery, quite early and in shallow boxes. Firm potting is very essential, it being productive of a sturdier and more compact growth. The chief factor as regards soil is good loam, road scrapings being a good addition thereto in lieu of sand. I do not advise any free use of manure in the soil; some small amount of well-decomposed leaf-mould or of spent Mushroom manure would be ample. Later on when the spikes are advancing an occasional application of an artificial stimulant or of liquid farmyard manure will greatly benefit the plants. In no case, however, should excessive watering be indulged in; it must rather be guarded against, as prejudicial to the plants, more particularly when coming into flower. If this point in their culture be not attended to, the plants will cast their foliage prematurely, being denuded of leaves at the base, thus looking lean and meagre. The best method of support, which can scarcely be dispensed with, is slender Bamboo sticks painted green. By the use of these in a moderate manner there will be nothing unsightly. It will be well, however, to do the staking twice: first as supports in a temporary manner during growth, otherwise the shoots, by reason of their very rapid development, will split away at the base, and, secondly, just prior to the first flowers opening.

Having secured a specially good strain of seedlings by selection, it is well to stand aside the best of these for seeding, only allowing the finer flowers to produce seed. If it is desirable to propagate particular varieties by themselves, it can easily be accomplished by the roots, as in the case of Seakale by sets. This mode of increase should be attended to as soon as

the plants go out of flower, making the sets as in the case of Seakale, they being smaller of course. These should be covered with silver sand for a few days to stop any bleeding, and then they can be pricked off into boxes and put into cold frames. The selection made by Mr. Wythes, of Syon House, is of dwarfier growth with stout spikes, bearing the flowers well down to the base;



The Chimney Bellflower (*Campanula pyramidalis compacta*). From a photograph sent by Mr. J. Hudson, Gunnersbury House, Acton.

out-of-doors by the middle of March with a little shelter, it being a good plan to plunge them straight away in eider ashes up to the rims. This, in fact, is the best way to winter them in the frames, so as to protect the pots from breakage by frost. Another plan by which some amount of time is saved, as well as a

wintering in frames, is to sow in February in a

the individual flowers are large and show considerable variation in colour. This is known as the "compacta" strain or Syon House variety.

The plant from which the photograph of the plate was taken was only 3 feet 6 inches in height from the pot. PLANTSMAN.

## FERNS.

### VARIEGATED FERNS FOR THE WARM HOUSE.

ALTHOUGH, generally speaking, Ferns requiring stove temperature are not considered as useful from a decorative point of view as their congeners of a hardier constitution, the list of their variegated forms contains some equally well-marked plants, some of which are of easy culture, and I may also add that most of them possess decorative qualities to a very high degree. If we take the genus *Adiantum*, we find several nicely variegated forms, the most remarkable amongst them being undoubtedly the beautifully coloured *A. macrophyllum albo-striatum*, a somewhat cumbersome name for such a very handsome plant. It is an extremely pretty form which, according to reliable information, appears to have made its appearance simultaneously in England, in France and in Belgium some ten years ago—an occurrence which can scarcely be accounted for in any way. In each case the variegated plant has preserved the erect, somewhat rigid habit of the typical species, and the fronds, rising from an underground creeping rhizome, attain from 12 inches to 18 inches in height. Their large and peculiarly-shaped leaflets are, like those of the type, of a delicate pink or red colour, which eventually attains a crimson hue; but they are irregularly, but abundantly striped with white, which variegation, besides being the principal ornament of the partially developed fronds, remains perfectly distinct and prominent when the foliage has assumed its permanent bright green colour. Some grand specimens of this lovely Fern were exhibited by Messrs. J. Veitch and Sons at the Temple show last May, when the pleasing mixture of the colours was much admired.

*A. cuneatum variegatum*, a plant sent out some two years ago by Messrs. Pitcher and Manda, is certainly distinct in itself, but it is questionable whether the variegation, although well marked, is sufficiently conspicuous to add to the decorative value of the plant, which, by its loose habit and the slender nature of its fronds, reminds one much more of a variegated form of *A. elegans* than of the popular Maiden-hair Fern. A much better form of *A. cuneatum* with variegated foliage made its appearance in 1871 among the thousands of seedlings which were then annually raised in Messrs. H. Low and Co.'s nurseries at Clapton, for in those days *A. elegans* was not known. In this case the variegation was exceptionally good, the very dark green colour peculiar to the mature fronds of the species being copiously relieved by pure white streaks, which extended to all parts of the little fronds. Unfortunately, that most interesting and very promising plant was, through neglect, lost to cultivation and to the floral decorator. Instead of being separated during the process of pricking off, three or four seedlings had, as is frequently the case, been allowed to remain together, and one day the plant with the variegated portion in it was found to have disappeared among a quantity of young *A. cuneatum*, which had been disposed of for decorative purposes. This occurrence is all the more to be regretted, as the reproduction of the plant would have been watched with the utmost interest. Should another such form make its appearance spontaneously now, it would most likely be carefully preserved and be propagated by the division of the crown, if not from spores. In

*A. CLAESIANUM* we have a new variegated Fern, which is also a valuable acquisition. It was introduced from Brazil and exhibited at the Temple show last May by M. Linden, of Brussels (who named it after his collector, M. Claes, who discovered it), when it was much admired by all who saw it. Its growth is compact and tufted; its fronds, about 9 inches long, are composed of rhomboid pinnules of comparatively large dimensions, of a pale green colour, ornamented with a silver blotch at the base, from whence numerous silver lines radiate to the margins, which are bluntly toothed. It is stated that it reproduces itself perfectly true from spores. It is, however, in the genus *Pteris* that the most useful as well as the most striking Ferns requiring stove temperature are found. As regards beauty and richness of colour, there is no other variegated Fern which can bear comparison with

*P. TRICOLOR*, one of the most charming Ferns ever introduced into cultivation. According to Lowe ("New and Rare Ferns," t. 9), who describes it as "being graceful in habit, elegant in form, moderate in size, and splendidly variegated with green, white and red, well contrasted," it was introduced from Malacca by M. Linden. Although this really handsome plant has been known in collections for upwards of thirty years, it is only now and then that we hear of someone having succeeded in growing it to perfection, and in most cases this happens seemingly without anything special in the way of cultivation. Its well-being evidently depends more on local or climatic influences than on skilful treatment. As a proof of this, it may be stated that in some places where formerly this beautiful Fern was thriving it will now hardly grow, in spite of unchanged treatment; whereas, in other places, where for years it only contrived to exist, it occasionally makes a sudden burst and for a season or so grows apace. In the form and habit of this plant it resembles *P. aspericaulis* so closely as to leave no doubt as to its being a variegated form of that Fern, from which it is distinguished principally by the brilliant colour of its fronds, which sometimes attain 2 feet in length. These when young are of a purplish red or bright rose colour, and when mature their leaflets are of a vivid dark green at their edges, while their basal part is silver-grey, their midrib being of a permanent bright purplish colour. The diversity of colours in the fronds in different stages of development at the same time on each plant greatly adds to its beauty. If

*P. ARGYREA*, also introduced from the East Indies by Messrs. J. Veitch and Sons, lacks the extreme brilliancy of the fern above described, it may, on the other hand, claim to be perhaps the most useful of variegated Ferns where size is of some consideration. It is by far the more useful of the two East Indian forms and is particularly well adapted for pot culture for decoration, its gracefully arching fronds under liberal treatment frequently exceeding 4 feet in length. On account of its remarkably well-defined and striking variegation it is most effective, as the large band of silvery white in the centre of its fronds and leaflets forms a most pleasing contrast with the lively green by which it is surrounded in every part of the plant. Although sometimes recommended for growing in a cool house, where it thrives very well during the summer, this useful species evidently requires a higher temperature during the winter; its dislike to cold is clearly indicated by the brownish colour which its fronds, even when mature, assume under cool treatment in winter. Another very prettily variegated form of *Pteris* sent out by Mr. Bull some four or five years ago under the name of

*P. VICTORIAE* has all the appearance and is said to be exactly the same plant as *P. ensiformis variegata* of Moore, exhibited at one of the meetings of the Royal Botanic Society as far back as June, 1877, when it received a first-class certificate. It is a remarkably slender and graceful plant of small dimensions, producing two entirely distinct sorts of fronds, the barren ones being few in number, small and prostrate, while the fertile ones, up-

right and abundant, are 12 inches to 15 inches long and composed of narrow leaflets about a quarter of an inch broad. They are particularly attractive on account of their silver markings, which are conspicuous throughout the plant. Although it reproduces itself freely from spores, this Fern is given to variation, and some of the seedlings raised from it are thoroughly distinct; thus, for instance, is May's.

*P. REGINE*, which is of much more vigorous constitution, and in which the variegation runs in narrow stripes to the margins of the leaflets, showing very little, if any, of the green border noticeable in *P. Victoriae*. *P. Regina cristata*, also raised in Mr. May's nurseries at Edmonton, is another form with beautifully and distinctly variegated foliage of a more slender nature and very elegant habit on account of its fronds being very prettily and regularly crested.

*P. NOBILIS*, or, as it is more commonly called, *Doryopteris nobilis*, is another handsomely variegated Fern requiring stove temperature. It is a native of Southern Brazil, and, so far as general appearance is concerned, totally different from other *Pterises*. Its fronds, borne on naked, wiry stalks, vary considerably as regards shape and size, according to the age of the plant on which they are produced. In its young state it only produces single, heart-shaped fronds, and the next ones are sagittate or arrow-shaped; while these eventually developed are halbert-shaped and finally somewhat palmate in form, with the terminal and the upper lateral leaflets entire and the lower lateral ones divided into two or four spear-shaped segments on their lower side. They are of a bright green colour, and their broad, slightly undulated segments are ornamented throughout their centre with a broad white band, which gradually diminishes in intensity towards the edges.

To the above list of variegated Ferns may also be added the variegated forms of *Selaginellas*, as they are closely related and thrive under the same treatment. Besides the golden and the silver forms of the common *Selaginella*, respectively called *S. Kraussiana aurea* and *S. K. variegata*, which during the winter require to be kept close to the light in order to prevent their damping off, the most popular, the most useful and the best known is *S. Martensi variegata*. This variety has retained the habit and vigour of the typical plant, which is of erect habit, but the dark green leaves which clothe the succulent stems, which on their underside produce a great quantity of roots, are profusely blotched with creamy white—a character which, though not quite constant, is readily reproduced by means of cuttings, which root freely in a light porous soil and a warm, moist atmosphere. DOODIA.

*Polypodium (Phlebodium) aureum arcuatum*.—Where cut flowers are in demand and a glass accommodation somewhat limited, there is often at this time of the year a great strain on the resources, which can only be met by growing such things as last well in a cut state. Foliage, too, must be provided in plenty, as the open garden will not now give much variety in this way. Ferns are largely grown for the purpose, and most of them associate well with cut flowers of any kind, their worst fault being a tendency to wither quickly. A most useful kind (especially for large vases) which has not this fault is the one named above. Fronds of this which were cut more than three weeks ago are now looking as fresh as when cut. The glaucous hue on the foliage shows up well under artificial light, the fronds looking quite silvery and distinct from any other thing we have. This Fern is quite one of the easiest to grow, as it is not at all fastidious as to soil. Given plenty of drainage and plenty of water, good fronds and plenty of them will be forthcoming. Like most of the *Polypodiums*, growth commences late in the season and the

plants are at their best in mid-winter, which is a great advantage. Anyone wishing to add to his stock of useful winter fine-foliated plants could not do better than get a few plants of this if not already in stock.—J. C. TALLACK.

## NOTES OF THE WEEK.

**Snowdrops.**—It is worthy of notice how much later these are coming into bloom this year than last. Three years ago I had them in full bloom at the end of January, but now (January 26) they are only just showing flower. On a shallow ledge where they generally come early they are equally late. I think this arises from the cold summer.—J. CROOK, *Forde Abbey*.

**Water Hawthorn.**—The slight frosts we had in October did not seem to check the blooming of this interesting water plant, fresh flowers appearing until a few days before Christmas. *Aponogeton distachyon* does best when planted in about 2 feet of water, and if it can be placed where the water enters the pond it will do much better and have a better chance of not being frozen.—J. W. H.

**The Genevan Plant Protection Society.**—I said in my last letter that I would not answer further letters of Mr. Leonard, and I will keep my word. Readers of THE GARDEN who would like to have an answer about these letters will find them in our next "Bulletin de l'Association pour la Protection des Plantes," which will appear this month or in the beginning of March, and which will be sent to anyone who asks for it.—H. CORREVOX, *Geneva*.

**Rosa moschata nivea.**—In his account of *Rosa moschata nivea* "A. H." says that as to its origin and history he can give no information at all. In the *Botanical Register*, vol. x., 861, he will find a good plate of it, with its full history, by Dr. Lindley. It is a beautiful Rose, and easily propagated by cuttings. I have had it for many years. It is not in the Kew list of Roses, but I believe they have it.—HENRY N. ELLA-COMBE.

**Helleborus colchicus Zenith.**—I do not know if the above variety of *H. colchicus* is grown in many gardens. If not, it would make a beautiful addition to the early spring flowering plants. It is quite a distinct form, and much earlier than any of the Lenten Roses. Since the first week in December flowers of the above have been plentiful. Although the stems were short when the first flowers developed, they are now 6 inches or 8 inches in length, with several well-expanded flowers on each. The colour is a very rich purple; the petals inside look as if they are lined with velvet, the centre having a large cluster of cream-coloured stamens, which add to the beauty of the flowers.—J. W. H.

**Olearia Haasti.**—In THE GARDEN of January 12, and also of January 26, much has been said in favour of this most useful and ornamental shrub. While cordially supporting all that has been said in praise of this plant, I should like to point out an additional good quality not mentioned by your other correspondents. *Olearia Haasti* is one of the few flowering shrubs that will thrive beneath the shade of other trees, and I have frequently seen it succeed in places so densely shaded, that even common Laurel would not grow. It flowers late in the season, when the blooms of spring-flowering shrubs are past, and is all the more valuable on that account. When planting shrubs beneath the shade of trees we generally fall back on Aucuba, Holly, Yew, Laurel, and such like, and an evergreen flowering shrub, such as *Olearia Haasti*, will be welcomed, especially as its flowers appear at a season when there are comparatively few shrubs in bloom.—F. W. MEYER, *Exeter*.

**A note from Oregon.**—Our old friend Dr. Bolander writing to us under date January 10

from Portland, Oregon, says: "The immediate environs of Portland are not rich in plants, but the regions of the mountains near by certainly are. From any small elevation of this town (of 75,000 inhabitants) we have in sight the snow-capped mountains: Mt. Hood, 12,000 feet to 13,000 feet; Mt. Adams about the same height, Mt. St. Helens and Mt. Rainier. I am told that Mt. Adams and Mt. Rainier are very rich in curious plants. Mt. Hood is not, neither on its east nor its west side, for I ascended both. The environs of this city are grand. Besides the mountains we have in the city the navigable river Willamette, joining the great Columbia 13 miles below here. The most of the land is still covered with large coniferous forest trees, Douglas Spruce predominating. The southern part of this State has more the make up of Northern California. We had a catalogue of plants of the entire State by Thomas Howell, but it is now out of print. The author is now working at a flora of this State. I am now an old man, unable to go much about, but still I cultivate many plants in a small garden to while away my leisure time. A few words on climate. Our winters are in the main very short. Snow 1 foot to 2 feet only in some winters, like the present. Tea Roses hardly ever freeze. Rain a good deal till June, but not thirteen months, as our enemies say. During July till September often not a drop of rain falls. This is a pity. The summer heat is not great, the nights being cool."

**National Chrysanthemum Society.**—In addition to the three exhibitions announced to take place at the Royal Aquarium in October, November and December, the usual show of early Chrysanthemums, Dahlias and Gladioli will be held on September 3, 4 and 5, the National Chrysanthemum Society giving £20 in prizes for early Chrysanthemums, and £10 towards the Dahlia and Gladioli classes, supplemented by a grant of £50 from the Royal Aquarium Society. The schedule of prizes will be issued, as heretofore, with that of the National Chrysanthemum Society.

**The Gardeners' Orphan Fund.**—A meeting of the executive committee took place at the Hotel Windsor on the 25th ult., Mr. William Marshall in the chair, there being, as usual, a large attendance of members. The secretary, Mr. A. F. Barron, announced the following special donations: From Mr. M. Todd, seedsman, Edinburgh, sale of flowers, £13 10s.; Mr. H. J. Jones, Rycroft Nursery, Lewisham, visitors to his display of Chrysanthemums, £9; the Midland Carnation Society, Birmingham, per Mr. R. Sydenham, £5; Mr. J. Kipling, The Gardens, Knebworth, skating on the lake, £2; Mr. H. Herbst, Kew Road, Richmond, £1 1s.; Mr. W. H. Divers, The Gardens, Belvoir Castle, Grantham, 8s. 4d. From boxes: Mr. William Marshall, Auchincraigh, Bexley, £1 7s. 10d.; Mr. J. Hughes, Harborne, Birmingham, £1 3s. 3d.; Mr. G. Fry, Lewisham, £1 1s. 10d.; Mr. H. Perkins, The Gardens, Greenlands, Henley-on-Thames, 10s.; also a number of small sums, also from boxes, and all equally welcome. The secretary brought up a draft report and balance-sheet of a satisfactory character, considering the general depression in business. They were passed for presentation at the annual general meeting on February 8, at which Mr. Harrison, of Leicester, will preside.

**The weather in West Herts.**—A very cold week. On the coldest day (Monday) the temperature in shade at no time exceeded 30°, and during the following night a thermometer exposed on the surface of the snow indicated 25° of frost, or a lower reading than any previously recorded during the present winter. A similar reading was also registered on Tuesday night. At 2 feet deep the temperature of the ground is now within 4°, and at 1 foot deep within 2° of the freezing-point. During the past month there have only been seven mild days and the same number of mild nights. Taken as a whole, it was the coldest January I

have yet recorded here, my observations dating from 1885. The mean temperature of the soil was also low, being at the depth of 1 foot 1° below the January average for the previous nine years. Rain or snow fell on no fewer than twenty-two days, and to the total depth of 3 inches, which is rather more than a quarter of an inch in excess of the mean for the month. There were three distinct falls of snow. On the 13th the ground was covered to the depth of 3½ inches, on the 22nd to the depth of 2½ inches, and on the 28th it was 1½ inches deep. Besides being cold and wet this was also an unusually gloomy January, the average record of sunshine only amounting to about an hour a day. Another feature of the month was the great predominance of north-westerly winds; indeed, for altogether 432 hours, or eighteen days, the direction of the wind has been some point between west and north.—E. M., *Berkhamsted*.

**What's in a name?**—While thoroughly sympathising with the dislike felt by some of your correspondents to the many plant names that are uncouth and very long, we ought to remember that there is the other side of the question. If we want to correspond or share information with Continental friends, I fear that Virgin Bower, Bald Money, Avens, Almond Cross, and other excellent British names might not avail always to identify our plants. The constant revision and division of generic names is a sorrow in all branches of natural history. It would seem as if sub-genera might meet the case in many instances without disturbing names well known and understood. Then as to specific names, it would indeed be a gain if a little self-restraint were practised, especially by some German and Russian botanists, so as to avoid, for the sake of weaker brethren, such stumbling-blocks as *Kolpakowskiana*, *Szovitzianum*, *Tschibatchewi*, and the like, memorials no doubt of dear and honoured friends, but striking us as somewhat offensive. Though as to this, too, we perhaps look at the matter from an insular point of view, for an attempt to pronounce our surnames might prove an equally stiff obstacle to them. As to the myriad hosts of florist flower names, no doubt there is a very natural feeling in their authors of pride and satisfaction which leads them to associate a novelty with some beloved member of the domestic circle or some generous patron, and being a very human tendency it is likely to continue.—F. L. S.

**Plants wanted.**—Perhaps some of your readers can tell me where a good strong clump of *Lathyrus magellanicus* (true) can be had. I have searched many catalogues and cannot find it. I also want seeds of *Dipacis sylvestris* or *lacinatus*. I suppose seed-men think *Teasels* too common for their lists, but none grow wild in the north, and I want them for a bit of wild gardening.—M. P. FORSTER, *Corbridge-on-Tyne*.

## RAINFALL IN 1894.

OTELEY PARK, ELLESMERE, SHROPSHIRE.

Month.	Total depth.	Greatest fall in		Number of days on which '01 or more fell.
		24 hours.	Date.	
	Inches.	Depth.	Date.	
Jan.	2.38	—	—	25
Feb.	2.16	—	—	21
March	1.76	—	—	15
April	1.67	—	—	18
May	2.91	—	—	21
June	2.77	—	—	18
July	3.15	1.40	24	18
Aug.	3.81	—	—	23
Sept.	0.72	—	—	7
Oct.	3.0	—	—	14
Nov.	3.10	—	—	19
Dec.	2.53	—	—	20
Total	29.16½			219

—C. A. PEARSE.

**Name of plant.**—*Jas. Hartland*.—*Justicia calycotricha*.

**Name of fruit.**—*Jas. Hartland*.—Apple not recognised.

"This is an Art  
Which does mend Nature; change it rather; but  
THE ART ITSELF IS NATURE."—*Shakespeare.*

## ORCHIDS.

### NOTES ON ORCHIDS.

THE lengthening days herald a period of increased activity among Orchids, and all arrears of winter work, as cleaning and preparing composts, should be completed without delay. Deciduous *Calanthes* as they go out of bloom should be placed on a dry shelf in a warm house in the pots in which they have been grown. No attempt should be made to start them until they break naturally, when they may be placed at once in their flowering pots, starting in small pots being quite unnecessary. Many *Cypripediums* may now be potted—in fact any not being in flower that require it. Equal parts of peat, chopped Sphagnum, and fibrous loam, with plenty of charcoal and small crocks, will suit the stronger growing kinds, while for those of weaker growth less loam should be used, and some rough pieces of limestone added or used in place of crocks for drainage. Other strong-growing semi-terrestrial Orchids, as *Anguloas*, *Peristeria*, and *Phaius*, may as soon as signs of new growth appear be repotted, using a compost similar to that for the strong-growing *Cypripedes*, enriched with a little dried cow manure. Especial care must be taken with the drainage of all these Orchids, as they require so much water when growing. In potting, remove all decayed roots with a sharp knife and all sour portions of the compost. Beginners in Orchid culture are apt to be afraid of burrowing with the hands among the roots for this purpose, but this is a mistake, as if carefully treated afterwards no harm can accrue from this; whereas if the soured compost and half-rotten roots are allowed to remain, then decay soon spreads to the sound and healthy portions. The temperature of the *Cattleya* house must now be slightly increased, and the atmosphere kept proportionately moist. Where such as *C. Trianae* and *C. Schroederi* are in bloom, care must be taken that no water touches the flowers, as this soon spots them, greatly marring their beauty. Late plants of *Dendrobium nobile* and others must not be kept too moist, as until the flower-buds can be distinctly seen there is always a danger of their producing growths instead. Those *Dendrobes* that are naturally late in finishing up their growth, as *D. macrophyllum* and *D. Dalhousianum*, should be encouraged to grow as early as possible, in order that the new pseudo-bulbs may ripen with the waning sun in autumn. Plants of *Lælia anceps* as they go out of flower may be repotted if necessary, but this ought not to be oftener than once in two or three years, provided some of the surface compost is removed annually and a little fresh substituted. In repotting set the leading growths as far as possible from the rims of the pots and bed the compost firmly. Keep a sharp look-out for yellow thrips on *Masdevallias* coming into flower, as they soon ruin the appearance of the flowers if not kept under. The roots of these Orchids are now very active and they must not be allowed to get dry. Green fly is also beginning to be troublesome both among these and the advancing spikes of *Oncidium*s and *Odontoglossum*s. If these are daily looked for and removed with a slightly damp sponge, there will be no need of fumigating, but a little

tobacco powder or sulphur may with advantage be dusted lightly about the young growths. *Odontoglossum citrosum* must be kept quite dry at the roots until the flower-spikes can be seen in the points of the young growths. It does not matter if the pseudo-bulbs shrivel, as they quickly plump up again if watered as soon as the spikes are visible. A light position at the cool end of the *Cattleya* house suits this Orchid at this season. *Vandas*, *Aerides* and similar Orchids must, as soon as they are seen to be on the move, be top-dressed with Sphagnum Moss. If there is the slightest disposition to souring, let all the old Moss be picked and washed away, all decayed roots cut off and the sound ones relaid among new material, covering as many as possible of the air-roots at the same time. Keep all glass, stages and pots clean, have the houses washed out daily, and sprinkle a little soot and lime under stages and in out-of-the-way corners. Small pieces of Potato or Carrot laid about in the evenings and examined every morning make good traps for woodlice and small snails, which must be diligently kept under, or they will work much mischief among the young roots and tender growths. H. R.

**Angræcum Leonis.**—Of this singularly distinct species there is a large stock in one house at St. Albans. These plants are unusually vigorous, with the characteristic fleshy leaves of large size, the aerial roots being correspondingly abundant. This species with its large sweetly-scented blossoms of the purest white is one of the best of all Orchids in cultivation for bouquets, sprays, &c. For this purpose its flowers would undoubtedly be much sought after by florists if it were more plentiful. What a contrast is afforded in one genus between such as *A. Leonis* and *A. sesquipedale*, *A. citratum* and *A. eburneum*!—*ORCHIDS.*

**Pilumna nobilis.**—The older variety, *Pilumna fragrans*, is the better known, or rather more plentiful species, but *P. nobilis* is much the better variety. I was told the other day by a good Orchid grower that the sweet-scented *Pilumnas*, or *Trichopilias* as they are now called, degenerated in a few years after a course of treatment in our hothouses. This degeneration is caused, I believe, through growing the plants too warm. The *Cattleya* house is too warm for them, as I find the plants succeed well year after year if grown in the cool house along with the *Odontoglossum*s, the pseudo-bulbs finishing up to a large size. Another mistake is through over potting. If potted at first in a well-drained pot, using the best fibrous peat, the plants need not be disturbed for three or four years unless the compost has become sodden. The rooting material only requires to be kept fairly moist whilst the plants are growing. After growth is finished only give enough water to keep the plants plump.—*A. YORKE.*

**Cypripedium species at St. Albans.**—These are, like the hybrids, grown in immense quantities, no opportunity of adding to the collection being lost. Many of these are species that have been imported direct from their native habitats; but whether this be the case or not, all are in most luxuriant growth, finding evidently a very congenial home in the light, low span-roofed houses. *C. Chamberlainianum* is represented by some very fine, healthy, well-established plants, some of which are just coming into flower, and, considering the fresh condition of the plants, the best possible results should obtain. There is one remarkable feature about the flowers of this distinct species which I had not noted until my attention was drawn to it by Mr. Maynard. It is in the twist of the petals, the right petal turning under and the left over; this appears to be a fixed character of this variety. There is at the present time a very fine stock of *C. Dayanum*, which for the sake of its beautifully marked foliage alone is worthy of a place in any collection. It is

beyond doubt the best of any in this respect, the pure silvery mottling standing out in such contrast to the pale green. I recollect well seeing this *Cypripedium* in Mr. Day's collection at Tottenham at the time of its introduction. The montanum vars. of *C. insigne* are plentiful and so very distinct. *C. villosum aureum*, in its true character, and *C. villosum Colossea*, with extra large bold-looking flowers of deep colour (a very fine form), were both good. *C. callosum* and *C. Spicerianum* were both in flower, the latter being a superior variety. *C. Sanderianum*, which belongs to the *Selenipedium* section, is a distinct species, with elongated petals and a pointed lip; its influence will no doubt be apparent before long in the hybrids. Most of the true *Cypripediums* at St. Albans are grown in the span-roofed houses already noted, but those of the *Selenipedium* type are chiefly to be found in the long corridor-like structure.—*ORCHIDS.*

**Cattleya Trianae.**—The flowers of this fine spring-flowering species are now commencing to open. The first flowers I have seen this year were in the Victoria Nurseries, Holloway, where the species is largely grown and well represented by both light and deep coloured varieties. This plant belongs to the *labiata* section and is a native of New Grenada, from whence it was imported many years ago. It has become very popular in our gardens, and enormous quantities are from time to time sent home. This species varies considerably in the colour and markings of the blooms, and during recent years some most beautiful kinds have received varietal names.—*W.*

**Cypripedium purpuratum.**—I recently noticed this very distinct and pretty species in flower. It is a very interesting plant, and is easily distinguished from all others in cultivation. It appears to be getting scarcer each year. It is also stated to have become exceedingly rare in its natural habitat in Hong Kong, and it is to be hoped that it will not eventually die out entirely. It was amongst the first known kinds to be introduced to our gardens and has been used by the hybridist with excellent success. Such beautiful hybrids as the following claim *C. purpuratum* as one of their parents: *C. H. Ballantine*, *C. Maynard*, *C. Cyathea*, *C. Edith Winn*, and several others.—*W. H. G.*

**Cypripedium insigne varieties.**—From "W. M." comes a box containing flowers of this old favourite, Nos. 1 and 2 being the beautiful variety *punctatum violaceum*, or, as it is often called by the Continental growers, *Chantini*. No. 1 is a nice coloured form, and "W. M." says the plant is carrying over forty of these fine blooms. No. 2 is a rather paler flower of the same kind. The other two blooms arrived in poor condition, the box having been broken in transit. No. 4 appears to be the variety *C. i. Maulei*, and possibly No. 3 may be *C. i. Wallisi*, but without flowers in good condition it is impossible to name varieties of this species. At the present time so many have received varietal names, that it becomes an almost impossible task to identify one from the other, excepting in the most distinct forms. I should like to see Nos. 3 and 4 again.—*W. H. G.*

**Cymbidium Lowianum.**—This Orchid appears to be unusually good this season, the spikes on many plants I have seen being especially fine and the growths very strong and healthy. When there is room for them the different species belonging to this genus are very attractive either in or out of flower, and, lasting as they do for many weeks in perfect condition, are very useful in keeping up a show of flower. This does not distress the plant to any appreciable extent, as in the case of *Oncidium*s, *Odontoglossum*s, and others. Those commencing the culture of this Orchid should procure strong established plants, as these are far more likely to do well than newly-imported species, especially if they have suffered much in transit. The compost best suited to its requirements is three parts of good sound peat to one of fibrous loam, using this in a rough state, and adding thereto a little chopped Sphagnum

and plenty of charcoal or broken crocks. The pots may be fairly large, as plants in good condition grow rapidly, and the drainage must have special attention. The roots of this Orchid are stronger and more persistent than those of some others: therefore, in repotting they should not be disturbed more than is absolutely necessary. Of course, no Orchid roots like disturbance more than those of any other plant, but with some of these it is a necessity, as they do not wrap and hold the compost together in the way of those of *C. Lowianum*, and in consequence some parts get sour and must be removed. The best time for repotting is as soon as possible after the flowers are past, and the plants must be encouraged to grow strongly by placing them in the warmest part of the Cattleya house and keeping them moist both at the roots and in the atmosphere. They must be shaded from direct sunlight, and when in full growth occasionally watered with weak liquid manure, that made from cow manure and soot being the most efficacious and safest. Frequent spongings are necessary to eradicate the small scale that attacks the foliage, and which if left alone soon spoils the appearance of the plants. *C. Lowianum* was introduced from Burmah in 1878 and has several varieties, these differing from the type chiefly in size and the colouring upon the lip.—H. R.

**Cattleya labiata** (white variety).—I am in receipt of a bloom of another albino of this lovely and useful Cattleya from W. Eastwood, of Newchurch, Manchester, who says that it has "just flowered for the first time from a dozen imported plants recently purchased." This bloom has the appearance of having been produced from a weak growth, and will no doubt be much finer another season. The sepals and petals are pure white, as is also the lip, which latter is distinctly veined with delicate rosy carmine. It resembles the beautiful variety *C. l. R. J.* Measures recently noted in THE GARDEN, although not of such fine form. This possibly may be owing to the weak state of the plant. W. Eastwood may congratulate himself in having such a fine form occur out of a dozen plants. If it blooms next season I shall be pleased to see a good fresh flower.—W. H. G.

#### HYBRID CYPRIPEDIUMS.

For several years past there has been a marked increase in the numbers of hybrids shown by various raisers from time to time. If anyone should have entertained the idea of any cessation in the supply he will find it far otherwise; at least this will be the case as far as Messrs. Sander and Co. are concerned. The hybrid Cypripediums alone are a most important feature in this establishment; there are literally thousands of them at the present time in various stages of development, from the larger ones showing flower down to the very tiniest speck, scarcely discernible upon the surface of the soil. In the raising of these hybrids order and method are strictly followed out, and every past experience is brought to bear upon the hybridisation now carried on. When it is known what results have been obtained by intercrossing various species, many of which are far removed from each other, the process of raising seedlings from these same and other crosses becomes all the more interesting. The practice at St. Albans of sowing the seeds in the pots of other Orchids may be the same as practised by other raisers, but it is here followed out in a most systematic manner. These are raised not only in the pots of other Cypripediums, but also in those of *Lælia* and *Cattleyas*, nearly all of these foster-parents being themselves hybrids. The healthy growth of these seedlings is most remarkable; they are thriving like so many annuals of the easiest possible culture. Of hybrids in flower early in January there were *C. Calypso* (Oakwood var.), a very distinct and choice hybrid, in which the colour is intensified. Another hybrid, the result of crossing *C. Curtisi* and *C. Rothschildianum*, bids fair to be a decided acquisition; two such parents should result in a fine offspring. *C.*

*graude*, another hybrid, was very vigorous. Beside it was *C. nitidissimum*, one of the very finest and choicest hybrids of the *Selenipedium* group. *C. Leeaunum giganteum* was in its best form. Another variety named *virginale* was most decidedly distinct in its pure dorsal sepal. *C. nitens* (Sander's var.) has flowers of great substance and with darker spots than the type. *C. Lathamianum aureum* is a richly-marked hybrid suffused with a golden shade; *C. Masereelianum*, at one time exceedingly choice and still far from plentiful, is also fine. *C. Lynchianum*, the result of crossing *C. Spicerianum* with *C. selligerum majus*, is a most promising hybrid. *C. Leeaunum James Hamilton* is a very attractive and fine form, distinct from, but quite equal to *C. l. giganteum*. ORCHIDS.

#### SHORT NOTES.—ORCHIDS.

**Lycaste Skinneri Reginae**.—This, which I recently noticed flowering in Mr. Williams' nurseries, Upper Holloway, is a very distinct and striking form, of large size and good substance, the broad sepals being white, slightly flushed with rose, the petals shaded with a rich shade of carmine.—W.

**Lælia anceps Fitchiana**.—I recently saw a very distinct form of *L. anceps* under this name. The flower is of very large size; the side lobes of the lip, well reflexed and prominent, are mottled with a purplish-mauve colour, as are the other segments of the flower. It makes a pretty contrast to the darker as well as the white varieties.—W. G.

**Cœlogyne cristata** (Chatsworth variety).—Some very large specimens of this choice variety are now a mass of bloom at Harrow Weald House, many of the pseudo-bulbs measuring 6 inches and more in circumference. This is one of the most useful and easily grown Orchids we have, but to grow it to perfection it certainly requires some extra attention. *C. cristata Lemoniana*, with the citron-blotched lip, was also in bloom, and very distinct from other kinds.—W. H. G.

**Cypripedium Dauthieri striatum**.—Under this name comes a bloom of this hybrid from "G. M.," but it is far from being an improvement on the typical hybrid. *C. Dauthieri* is a cross between *C. barbatum* and *C. villosum*, and when represented by a good form is a very desirable kind. The variety here referred to is perhaps better known as *C. Dauthieri marmoratum*. The mottling on the whole bloom is very irregular and not at all pretty. This form is by no means uncommon, as it has appeared in many collections.

#### FLOWER GARDEN.

##### SELECTING THE FINER MICHAELMAS DAISIES.

To make a selection of the choicer Michaelmas Daisies much depends on a person's experience with them, because some of the most meritorious varieties under some conditions do not display their best features. Most of the trade lists that have reached me since autumn, 1894, have not, so far as I can see, adopted the modern names as authorised by the Aster Conference a year or two ago. I think this is a mistake or an oversight, for though much may be said in favour of sticking to old names in many cases, this is not one of such cases, but extremely exceptional. The Aster muddle called loudly for the revision, kindly made and well done by the Aster Conference, and their revised nomenclature—whether perfect or imperfect—has at least the claim of being the only one capable of being intelligibly followed. And further, owing to the fact that most of the choicest Asters are garden hybrids, it was not so much a botanic as a florist's set of names that was needed. But still worse, not only under the "old style" were, and still are, the names and plants mixed, but many nurseries have their own style—that

is, there is no sort of harmony in trade lists or trade material. This makes confusion more confounded, and it encourages that form of laxness which is, perhaps, the worst of all, for when a genus of plants is in a state of confusion, it largely takes away the personal responsibility of those who distribute the plants.

But to take things as they are, the best must be made of them, and as it is desired to get the best kinds in quantity, and as trade lists are the only sources, generally speaking, I fear that to some extent more must be secured for trial than are ultimately intended. The descriptions of the Aster committee, as furnished in the R. H. S. "Journal," vol. xv., parts 2 and 3, January, 1893, will be indispensable, and perhaps on the whole will afford the readiest means of getting together the best varieties; they at least point out many of the best kinds from a florist's point of view.

My own plan has been for years, with the object of finding the best Asters within the limited number of forty to fifty, to watch every likely trade list, and no matter what the names are, if they give the least hint of being something different from well-known varieties or from those either being grown or such as have already been tested, to secure a specimen. I have found many good Asters in this way, but I fear that it would be discouraging did I mention the scores of rubbishy kinds that had no value for a garden. In getting plants in this way the name with which they come is of little or no moment. If the flowers are not good they go, if worthy they stay, and the correct or approximately correct name is then sought for. Many good varieties have been discarded that would be well worth growing in a smaller collection than fifty, on the principle that they would not in a smaller collection have other varieties almost similar, or rather need not have in a small collection, and even in a larger collection than fifty they might be retained, simply on the score of variety and quality. But that is where I think the advantage of a limited number comes in. If, say, you limit your selection to forty, you can afford to discard good varieties when they happen to be very near to a preferred variety, and the result will be quality with wider distinctions. By no means an important point to watch in selecting the autumn Asters is the respective periods at which the kinds are at their best, so as to secure a long and even succession of bloom, or even when desirable to have the chief bloom within a given month. To accomplish this, whether the desirable period were early or late, I fear some of the best varieties would be shut out. As, for instance, did you insist on late September or October flowers, most of the beautiful vars. of the *Amellus* group would have no place, and did you want a September bloom merely, the *Novæ-Augliæ* group, all the four or five of which are superb, would be of no use.

And after all, you learn most and best by experimenting. Besides, you will learn in your own garden, what no one can tell you, as to its capabilities with these plants. The land may suit certain kinds to perfection, and with such kinds you will excel. Others may do as indifferently, so amenable are these plants to various soils and climate. But in every case it will be advisable to grow the plants for at least two years to do them justice, as in many cases, especially the cordifolius group, the kinds are more notable for their habit than their individual heads of flowers. March will be a suitable time to plant, and I would plant by preference in a stiffish loam, deeply dressed and manured. J. Wood.

Woodville, Kirkstall.



## THE GREAT ALPINE ROCKFOIL.

(SAXIFRAGA PYRAMIDALIS.)

As shown in the accompanying woodcut, this plant is one of the most useful and beautiful that could well be grown, and all who possess a garden, however small it may be, can have this floral pyramid in the greatest perfection without the assistance of artificial heat of any kind. In Dr. Engler's monograph of Saxifragas this plant is put as a synonym of *S. Cotyledon*. Although long considered in gardens as a distinct variety of that species, I am still of the opinion after having seen them growing together for the past ten years that the two are quite different. I have had wild plants of *S. Cotyledon* from Norway and the Pyrenees, and they are quite different from this gigantic *S. pyramidalis*. The latter throws up large spikes 2 feet to 3 feet in height, thickly covered with white, rose spotted flowers, forming a most charming pyramid, very useful in the decoration of the greenhouse and the conservatory. It is biennial so far as that the rosettes producing the flowers die when the season is over, but previously from the base of these old crowns are produced from six to a dozen or more of young ones ready to take their place the next year. When the plant is used for indoor decoration these young crowns are taken off and potted in good rich compost, grown on in a cool north house or frame and shifted as required until finally they reach the pots in which they are intended to flower. When the plants become pot-bound, a weak solution of liquid manure will be found beneficial. On the rockery the plants require to be planted annually, and new soil should be given them when this takes place; 6 inches apart will be sufficient, and if healthy and vigorous the plants will very soon almost meet each other. They make a pretty group in the open, and are much appreciated by those who have only seen the wild species on the Alps. K.

## COLOUR IN FLORISTS' FLOWERS.

TWENTY-FIVE years ago or more, when I first became acquainted with cultivators of florists' flowers, they had, as many have now, fixed ideas of colour as well as form in these flowers. The colours must be "bright, deep and rich." I well remember a striking instance of this on an occasion when the southern section of the National Carnation Society held an exhibition in Mr. Charles Turner's nursery at Slough late enough in the season for nearly all the leading northern growers to be present. Several very beautiful new seedlings were exhibited, and amongst them a handsome rose-flaked Carnation with large well-formed flowers; it was of a soft pale rose colour, which harmonised beautifully with the pure white. I pointed it out to the late Mr. Arthur Potts, but one glance was enough. He "would not have such a flower in his collection." It was passed over by all the northern judges; they would have rich deep rose colours and no other. I also produced from seed what I thought was a very pretty bizarre Carnation; it had stripes and flakes of rose and purple on a white ground, and when I put it in the bizarre classes I was told by one of light and leading amongst the northern florists to put it amongst the fancies, or I would be disqualified. No one cared for it, so I grew it for my own pleasure, until the editor of THE GARDEN offered prizes for the best Carnations in the various classes, and I sent the despised and rejected Carnation to be tried again. It won the first prize in the class, and was named Harmony because of the beautiful blending of the colours. It has gradu-

ally crept into cultivation, and is exhibited in the stands of show Carnations, but the strict florist will have none of it.

And so variety in colour is sacrificed to a preconceived notion that the colours in Carnations, whatever they are, should be of a dark, and not of a pale tint. The Auricula is even a more notable instance of this dogmatism. Like the Carnation, it has been a favourite garden flower for at least 300 years, and the point of excellence, the only standard worth working for in the eyes of the old-fashioned florist, is black. He calls it black, and when contrasted with the pure white centre of the flower it is as near black as possible; and when a variety with a splendid truss and perfectly formed flowers was produced with a plum or violet colour it

Harrison Weir esteems them highly for their sweetness and beauty.

I have been tempted to write on this subject because in any standard of excellence set up by florists a free play should be given to Nature in regard to colour, or a blending of two colours; the latter is also of some importance. When quite a young beginner I remember admiring a very beautiful seedling Polyanthus, but the stern old judge, long gone to his rest, at once rejected it because the yellow colour of the margin was not of the same tint as the centre. If I mention the Tulip, it will be with some diffidence. I admire it in all its beautiful tints of flame and feather, nor can we ever cease to remember all that the florists have done, not only in producing, but in preserving to us for so many years this and all the other beautiful garden flowers. We know and appreciate what they have done; we can only guess at what they might have done had not their minds been narrowed down to a certain groove as regards colour, to say nothing of form which might very well occupy an entire paper to itself. I mention the Tulip in this connection because the disqualifying points seem even more inexplicable than they do in that of the Auricula or the Carnation. A flower may be very beautiful in its form of petal, the purity of its cup, and the delicate tracery of flame or feather, but the anthers may be stained, and it is put aside at the exhibition. The anthers may be right in the next flower examined; it may have a rich dark-pencilled feather, but the beam, as it is termed, is of a light colour, or it may have a rich red and dark crimson on a deep yellow ground, and because of these two colours it is again rejected. "It is a tricolor, it is of no use," exclaims the florist. On this point of colour I know I am at variance with some of our best florists. If the exact colour flowers ought to be is to be defined with the exact form, &c., it seems to be very much like judging them by square and rule.



The great Alpine Rockfoil (*Saxifraga pyramidalis*). Engraved for THE GARDEN from a photograph sent by Mr. Hodder, Ponsoby, Torquay.

was cast out, and the rubbish heap became the receptacle of what might have been a thing of beauty, to be admired in the gardens of all tasteful persons. The same censorious spirit prevailed amongst the Polyanthuses at one time; all were rejected for black or dark maroon ground colours. Now they have ventured to classify them and distinguish between dark and red ground colours. Ever since I cultivated florists' flowers I have withstood this stifling of Nature in our favourite garden flowers, and it is some satisfaction to be supported by persons of undoubted artistic taste. In regard to the Carnation Harmony, the eminent flower artist, Mr. Moon, told me it was the most beautiful of its kind as regards harmony of colour; and in respect of the fancy Auriculas which the florists throw away, Mr.

The preference of one colour before another, or insisting on one colour only where there might be two equally effective, seems to some a dogmatic attempt to define beauty as something to be measured or meted out to cultivators of flowers. Our ideas of what is beauty in the flower garden have been changed in modern times. We may now go more into detail, and ask ourselves, what is beauty in a florist's flower? Surely not a long array all of one colour and all of one form. Variety is charming, and it is well that we have as much variety as possible in our gardens in colour as well as in form. A florist would throw away any Carnation in which the edges of the petals were fringed, and when the flower is a bizarre, a flake or Picotee, I believe the florists are right, but when we have the fringed edge in a border Carnation and the variety is self-coloured, I would say save it, grow it, and admire it. J. DOUGLAS.

**Edelweiss** (*Leontopodium alpinum*). — The most successful way of treating this plant under cultivation is by regarding it more in the light of a biennial, though, perhaps strictly, it may elaim to be a true perennial. Be this as it may, I have

never been so successful when growing it from division as when the plants are raised from seeds. Thus treated and by sowing a few seeds each year so as to make sure of some flowering tufts annually, it possesses greater vigour and produces its singular woolly heads more freely. It is surprising how varied is its growth in different soils and localities, and in no garden or locality have I seen it at any time so luxuriant as at Pusey House, in Berkshire. In these gardens it was a perfect picture. Seeds ripened freely, and by making sowings early in the year strong plants were ready for planting out during the summer. When planted out they always made rapid progress. At the time of flowering the plants were fully 1 foot high and were much admired.—E. J.

#### SOLDANELLAS.

THESE constitute a small group of extremely pretty and interesting alpine plants that are rarely seen in good condition in our gardens: indeed, their culture, so far as concerns maintaining them permanently in health and vigour, seems only indifferently understood. For a season or two the imported plants grow and flourish in the most encouraging manner, and ultimately attaining, as it were, their greatest perfection, send forth their tiny flower-spikes and pleasing flowers from almost every crown. But after this the plants appear to lose much of their vigour, and though a similar course of treatment is kept up, only a scanty growth and flowering are the result. In various ways, by pot culture and planting out in moist, shady spots in sandy peat and leaf soil, I have endeavoured to get a return of their former vigour, but without success. The general appearance of the plants is that of exhausted energy, which is not resuscitated, as is the case with many plants, by division and fresh soil. Whether the plants may in a measure be revived by dividing them into very small scraps and pricking them out after the manner of seedlings I do not know, as I have not tried such small divisions. Perhaps the better way of attaining success would be by obtaining fresh seed as far as possible, at the same time using every means of seeding the plants we have. In this way it may be possible to get greater vigour into the plants than when increased by division; at any rate it is worth a trial. Seeds of these plants, or at least some of them, would, I doubt not, be obtainable either from specialists at home or abroad, and if these were successful, a year or two would be sufficient to grow them into good plants. Some well-filled pans of these dainty spring alpine plants would come as a pleasant surprise to many lovers of alpine plants, and others who may not have seen them previously could not fail to be interested also. When gathered together in a sheltered nook in loam, peat, and leaf soil in about equal parts, the few species of which this genus is composed are very interesting. It is better, perhaps, to grow them thus, because they are then more readily accommodated with one essential in their culture, namely, moisture. In view of this I have wondered if any grower of alpine plants in the British Isles has attempted their culture in Sphagnum Moss, and with what result. When we hear of the success attending this method of culture in other parts of the world, and with some of the most unmanageable of rare alpine plants, the question of soils dwindles into insignificance. And it is quite possible that the moisture-loving nature of these Soldanelles may yield to this kind of treatment and produce better results than when grown in soil in the usual way. At any rate, with such a charming little group it is at least worth a trial when other methods only partially succeed.

*S. ALPINA* is the best known, perhaps, having been introduced upwards of two centuries ago. In height this species rarely attains to more than 4 inches or 5 inches, forming close upon the ground tufts of shining and somewhat kidney-shaped, leathery leaves. From these in March or April appear the tiny flower-stems, bearing pretty bell-shaped blossoms of a pale blue shade. The flowers, of which there are several on a stem, are deeply cut into narrow segments, having the appearance of a heavy fringe. Not far removed from this is

*S. MONTANA*, except that it is larger in all its parts, and consequently more vigorous. The flowers are also of a deeper shade of purple-blue and the corolla more deeply cut. I have been more successful with this kind than any, and, owing to its more vigorous nature, perhaps, the plants have attained fully 6 inches or 7 inches high, and borne from four to five flowers in a scape.

*S. PUSILLA* has blue flowers, the margins of which are not so heavily fringed and the scape usually only one-flowered.

*S. MINIMA* is a very tiny plant, as the name implies, rarely growing more than 3 inches high. This has flowers suffused with lilac, usually but one in a scape and prettily fringed at the margin.

E. J.

#### THE ROCK GARDEN.

##### WINTER EFFECTS.

JANUARY is, no doubt, the dullest and dreariest month for the rock garden, and plants which bloom at this time of the year are welcome. During the second week of this month we had here in the western counties (Devonshire and Cornwall) frost varying from 10° to 16°, followed by deep snow. But at the time of writing (third week in January) the signs of winter have already passed away, and on looking over various rock gardens, one cannot help being struck with such plants as present a pleasing appearance or are even in bloom at this season. In a well-arranged rock garden, plants of this class should be distributed with the greatest care, and should form a special feature in those portions which contain deciduous or late-flowering plants, and would, therefore, without such help look dull and uninteresting for several months to come. Christmas Roses have already been in bloom for some time, and form a most suitable material for intermixing and forming irregular groups among the larger kinds of late-flowering plants, especially in the rougher parts of the rock garden reserved for plants of the more robust class. This system of planting has great advantages, for later in the season when the Hellebores are past their foliage would set off the flowers of other plants succeeding them.

Among the earliest plants of the robust class I may mention *Iberis sempervirens* and *Geum aurum*, which here at Exeter are already in bloom in an exposed position out-of-doors. *Geum aurum*, by the way, is not so well known as it deserves to be. Its large handsome flowers are of a deep rich golden yellow, while the evergreen leaves are large and glossy, constituting quite an ornament in themselves when the plant is not in bloom. The flowering of this plant at this early season is no doubt premature, but it is none the less valuable on that account. There is no difficulty whatever in growing this *Geum*, as it seems at home in any soil or situation. Cyclamens are also now in bloom, and are ornamental both in their flowers and foliage. For plants now in bloom in a half-shady position few can surpass the blue *Hepatica angulosa* and the charming *Anemone blanda*. The deep azure-blue flowers of this *Anemone* rival those of the *Gentian* in brilliancy, and therefore make it most desirable, especially as its cultivation is so simple.

One of the neatest rock plants for winter flowering is *Iberis stylosa*. Here it has been in bloom for some time, and is now (third week in January) thickly laden with its pretty mauve blossoms borne well above the dark green glossy foliage. This plant is of exceptionally neat and compact habit, and is fit for the choicest rock garden. It does not spread rapidly like its congeners of the *Iberis sempervirens* type. The plant in question is growing here at Exeter in rather stiff loam, mixed with stones, on a sunny slope, which seems to suit it. On the same slope a square yard or two is covered by the pretty little *Ionopsidium acaule*, with its neat lilac-coloured blossoms fully expanded. This plant grows freely from seed sprinkled on the open ground, and forms a quickly spreading, but very neat carpet. It was sown on the sloping ground last spring and has flowered continuously throughout last summer and autumn, the flowers being scarcely more than 2 inches above the ground. The parent plants are now dead, but from their self-sown seeds has sprung a colony of plants which are now in full bloom, although less than a fortnight ago we had 10° of frost followed by snow.

Returning to perennial rock plants, I may mention the well-known *Gentiana acaulis* as a most valuable plant for winter effect in the rock garden. Not only is the foliage crowded together so densely as to form a bright green carpet, but it often happens that its large deep blue flowers appear as early as January. It is so this year, and I have already seen several blooms fully expanded, though the proper time for flowering is not till March or April. *Gentiana verna* (generally the first of the *Gentians* to bloom) is not quite so far advanced this season, and it will probably be some weeks before its buds are open. Its foliage, too, is not so conspicuous as that of the larger *Gentiana acaulis*: and although *Gentiana verna* is one of the choicest gems for our rock gardens, the other variety (*G. acaulis*) is certainly the most effective during winter. Other choice rock plants just now coming into bloom are *Saxifraga Burseriana*, *S. sancta* and *S. luteo-viridis*, all of which do best in a sunny position on sloping ground. *S. luteo-viridis* (often erroneously called *S. Frederici Augusti* or *S. purpureo-lutea*) is here the most advanced of these varieties, and at the time of writing the pale yellow blooms are already expanded, and stand out most effectively from a dense cushion of bright green foliage. *S. sancta* and *S. Burseriana* are just unfolding their blossoms, and in another day or two the rocky ledge from which they spring will be a picture pleasant to behold. I have so far confined my remarks to plants now in bloom, giving examples only of such as have come under my own observation. There are probably many other kinds elsewhere already in full bloom, but I think even the few I have mentioned will suffice to show that our rock gardens need be by no means so bare of flowers in the winter months as they generally are.

It is, however, not with flowers only that we may embellish our rocks during the dull season, but we may also choose from a very large number of plants whose foliage looks fresher and brighter in January than during the summer months when flowers are plentiful everywhere. The foliage of many evergreen plants changes colour during winter, and striking effects may be produced by tasteful combinations. How very effective, for instance, is *Galax aphylla* growing from a carpet of *Arenaria balearica*. The latter clings close to ground or stones, clothing them with the brightest green, while *Galax aphylla* grows about 6 inches high and its

ORCHARD AND FRUIT GARDEN.

GRAPE MRS. PEARSON.

THIS magnificent Grape does not appear to be planted so extensively as its merits would seem to warrant, yet all who have grown it speak in the highest terms of its general excellence. In my opinion it is only second to Muscat of Alexandria amongst white Grapes, and on some soils and situations it is really superior to that famous variety. Many Grape growers find Muscat of Alexandria shrivel at the ripening period or immediately afterwards in spite of all their efforts to prevent this, but Mrs. Pearson planted in the same house and by the side of the variety named not only produces a heavier crop, but is free from shrivelling in the berries,

from Vines planted in almost all sorts of soils. I have had charge of it grown in black, light, and heavy composts, in all of which it succeeded admirably, while some other varieties were pretty much a failure in the same vinery.

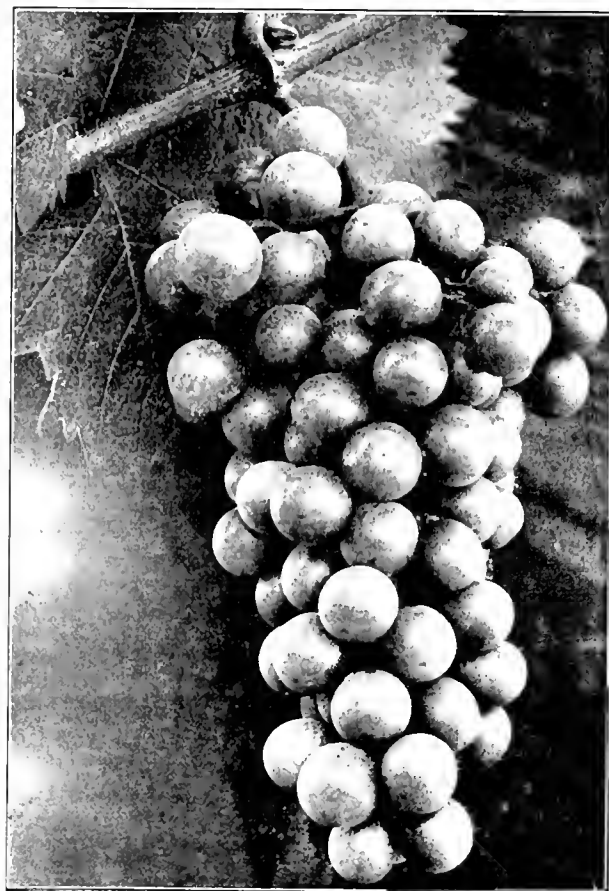
To get extra fine bunches of model shape I find it best to prune to the second or third bud on the lateral, whichever may be the most prominent. Such buds never fail to make a large bunch, but there is a risk that too many of these big bunches may be left on. Provided the Vine is in vigorous health, it is marvellous how the bunches will increase in length and breadth, considerably exceeding the estimated size, and the grower is loth to remove some of these fine bunches when it is observed that the crop is too heavy. Under those conditions it is a good plan to remove a bunch or two, thereby relieving the Vine of the strain somewhat, and also ensuring large berries with a high finish.

Another item is to endeavour to get each berry with its full number of stones; if four can be secured in every berry, they will attain a larger size than if only two stones were in them. To secure this result a perfect set is indispensable, requiring extra care at the flowering period. Naturally Mrs. Pearson is a free setter, but it may be assisted in a great degree by maintaining a warm buoyant atmosphere, with a night temperature of not less than 65°, rising 10° in the day. In the middle of the day a sharp rap with the hand will distribute the pollen, causing it to fly in all directions, and this rapping of the rods should be continued daily until all and every part of the bunches are set.

Another great aid to a free set and also the forming of the stones is an application of 2 oz. of superphosphate to every square yard of the border given at the time of starting the Vines, a similar dose being given immediately after the fruit is set. White Grapes appear to be more benefited by this dressing than black do, and Mrs. Pearson especially seems to enjoy it. From careful observation I feel sure that lime ought to be more employed in many gardens for Vines, and the lack of that essential element is a frequent cause of bad setting and indifferent health. There are various modes in which lime can be applied

with advantage. Superphosphate seems to have the best effect on light and medium soils, while those of a heavier character are most benefited by bone meal and basic slag. The latter should be applied early in the season at the rate of 2 oz. or 3 oz. to the yard, and as it is slow in action no immediate benefit will be apparent. These manures will supply the lime necessary for the Vines and their crops without setting free the other constituents in the soil, and may be given with benefit in addition to natural manure in a liquid or solid form. W. G. C.

**Plum Oullin's Golden Gage.**—I do not know of any better all-round variety than this, as it does well in most localities. This is an early Plum, well worth room in all gardens, and is little inferior to the best of the Gages. I have it only



Grape Mrs. Pearson.

and will keep perfectly sound and plump until May, which is usually as long as Grapes are required to keep. Under good management and provided the Vine is not overcropped, the flavour of Mrs. Pearson is infinitely superior to that of many Muscats, and when exhibited in perfect condition Muscats must be good to beat it in an open class for white Grapes. On several occasions in judging white Grapes I have voted in favour of this variety taking premier place, feeling well satisfied that it deserved that position. My contention always is that a badly-ripened, green or rusty stand of Muscats bears no proper comparison with well-finished Mrs. Pearson or other perfect white Grapes. One very important advantage Mrs. Pearson possesses, viz., not being at all particular as to soil, splendid bunches and fine, beautifully coloured berries being obtained

leaves are of the brightest scarlet just now, forming a most delightful contrast to the vivid verdure from which they spring. Very valuable, too, at this season are the many evergreen plants bearing brightly coloured berries, such as *Gaultheria procumbens*, *Vaccinium Vitis Idæa minus*, and other dwarf rock plants. But even without such contrasts of colour many of our best rock plants are in themselves highly ornamental. Very few plants can be more effective than that lovely queen of Saxifrages, *S. longifolia*. Who has not observed that the silvery rosettes of this beautiful Pyrenean Rockfoil are much whiter in winter than in summer? This is on account of the silvery encrustations of the leaves having attained their full maturity. A group of this Saxifrage planted almost horizontally into the upright or slanting fissures of a dull reddish-coloured rock looks as though it were coated with a permanent covering of hoarfrost, and forms a most pleasing picture.

Among other rock plants with silvery foliage I will only mention *Antennaria tomentosa*, which, though not as white as in summer, is nevertheless of a pleasing silvery grey, and the same might be said of *Alyssum serpyllifolium* and *Alyssum spinosum*, which, though not in bloom, are a great ornament to the rock garden on account of their compact silvery foliage. Of the many varieties of *Sedum* none are prettier and more effective at this time of the year than the kinds with either bright green or red foliage. Perhaps the brightest green of all is that of *Sedum crassifolium*, whose fleshy and glossy leaves impart an unusual brilliancy to that plant. This variety does not appear to be very generally known, but it cannot be too highly recommended. It grows about 4 inches high and bears yellow flowers in summer. It should be planted in masses, perhaps between taller plants that would flower at a different season. All through the winter the bright green of its glossy foliage is very striking. Of red-leaved *Sedums* (*i.e.*, red at this time of the year) I will mention *Sedum rupestre* and *S. pruniatum*, both of which form an excellent carpet of bronzy red.

In conclusion, I would call attention to the vivid green of such plants as *Hutchinsia alpina*, *Draba ggas* and many of the mossy section of Saxifrages, which might with advantage be employed for the double purpose of making the rock garden look more cheerful during winter by their verdure and at the same time form a most useful means of carpeting the ground between taller plants that would flower at a later season.

F. W. MEYER.

Everet.

(To be continued.)

**Aster cabulicus.**—I am most grateful to those correspondents who have given information respecting this species. Be *A. cassubius* a well-authenticated name or otherwise, it will be seen the plant meant is but a variety of *Amellus*; whereas *cabulicus* is a species so distinct as to belong more correctly to another genus, and is called *Microglossa albescens*.—J. W.

**Megasea Stracheyi.**—This, as a hardy plant, and as is often the case with fame, does not prove of much use with me. True, the flowers are a delicately tinted white, and of good size and bold spike in strong plants, but there are always drawbacks with such delicate flowers produced near the surface out-of-doors, and one can seldom see the flowers perfect. Nothing can be more unrepresentable than white flowers in a soiled state. The coloured *Megaseas* do not spoil, and they have taller scapes and brighter foliage. This is worthy of note—about the foliage—because the *Megaseas* have much of their value in the almost evergreen quality as open-air plants.—J. Wood, *Woodville, Kirkstall*.

in bush and cordon form, but last season in Kent I saw some very fine standard trees loaded with fruit. Its season is about the middle of August. It does grandly on a west aspect as a wall tree. With me, on a light poor Plum soil this variety succeeds where others fail, and the trees crop freely. I saw fine crops in Scotland a few years ago, thus proving its hardy free-growing character.—W. S.

**Grapes for a private garden.**—However interesting it may be to grow a collection of varieties of Grapes, it is pretty well known that the greater part can be very well dispensed with when it comes to the question of making a selection suitable for supplying a gentleman's table with high quality fruit. For this purpose Mr. Douglas (p. 1) limits his selection to seven varieties, and substitutes Black Alicante for Royal Vineyard. These, as it happens, are actually the varieties I grow here. Black Alicante is a fine showy Grape and succeeds admirably with me, but after the Mrs. Pince are finished I generally have a reminder that the quality is going off when the Alicante are being sent in. If Appley Towers black Grape as I saw it with Mr. Hudson at Gunnersbury House last autumn keeps up its good character, it will either form a good substitute for Black Alicante or a good companion. Previous to limiting the number of varieties to those above stated I used to grow Gros Maroc, Alnwick Seedling and Gros Colman, but as the quality was not cared for I had to cut them out. It is quite evident that as a rule there is too much of a mixed medley of varieties grown. When well grown Gros Colman suits some people, but as a rule it is seen anything but well coloured. A friend of mine who is very partial to experimenting with Grapes, especially in trying varieties on different stocks, showed me last November some splendid bunches of Gros Colman, the result of grafting on Madresfield Court. This latter is such a fine quality Grape that very few people would think or care of putting an inferior variety on to it. The berries were the largest for the variety I have ever seen and beautifully coloured. In the same house there are several Vines of the same variety on its own roots, but the fruit was not to be compared with that of the grafted Vine. Muscat Hamburg, again, we know is a splendid Grape, but it requires careful culture.—A. YOUNG.

#### SMALL PEARS OF RICH FLAVOUR.

THE rage for size is causing many of our small varieties to be greatly neglected by planters, but, although small, many of these Pears are of most delicious flavour, and the majority of the sorts are regular bearers, and far more certain croppers than the larger and more imposing sorts. In some gardens the smaller Pears are most appreciated on the dessert table, being of a more useful size than the big ones, and frequently of a superior flavour. The following varieties in their order of ripening are all small or comparatively so, and will afford a succession of well-flavoured fruit from July to well on into the spring months:—

**DOYENNE D'ETE** is well known for its earliness and pleasant flavour if eaten as soon as gathered from the tree, which crops profusely in all forms. Cordons especially bear heavy crops, and it must be a bad season indeed if this variety fails.

**MILLE SOULANCE** runs the preceding variety closely in earliness and good qualities, both ripening with me in July. Since planting this sort five years ago it has borne freely every year.

**CITRON DES CARMES** is another small early variety, the most highly-flavoured fruit being obtained from bush or standard trees. From such trees ripe fruit is produced from the beginning to middle of August. On walls the Pears are not so juicy, and according to my experience the trees in such positions are very prone to Pear scale.

**DR. HOGG** is a small, handsome Pear that should be better known. The fruits are beautifully

marked with red on the sunny side, and produced very freely both on the Quince and Pear stocks, and also on all forms of trees. In addition to those good qualities, the fruit is of a most pleasing flavour, and liked by all Pear lovers; in use during September, early or later in that month, according to situation of the trees.

**EYEWOOD** is a small October Pear, of excellent quality on our light soil, succeeding admirably in bush form, and is a continuous cropper, rarely failing to be more or less productive.

**ASTON TOWN** is an old favourite; the fruit, though small, is of delicious flavour. I think no variety bears such enormous crops on standard trees as this on almost all sorts of soil and in cold or warm localities. I have a strong recollection of having to assist to pick many bushels from great trees when under a well-known northern gardener, and also remember his advice, viz., "If ever you have to plant standard orchards, put Aston Town on the most exposed side to break the gales." The behaviour of the variety at that place proved the thorough soundness of the advice, as the trees had attained a large size and were very prolific.

**COMTE DE LAMY** comes into use about the same time as the last-named (October and November), and on good soil is one of the best Pears grown. By thinning out the fruit it may be had of fair size, but, as a rule, the trees are too prolific to produce big fruit.

**WINTER NELIS** is a well-known and favourite Pear, especially noted for its rich flavour, good keeping and productiveness. Seasons influence its period for use, but, as a rule, it may be relied upon from the end of November to end of January. For use after Christmas I believe

**JOSEPHINE DE MALINES** has no equal; the quality of the fruit is Al, and is in use from January to March inclusive. In every part of the country that I have known this excellent variety it has cropped well on walls, and in warm and suitable districts bush trees are heavy bearers. To have the fruit as long as possible it should be allowed to remain on the trees to the latest possible date, only gathering it on signs of sharp frosts; in fact, I have had the fruit out in several degrees of frost without its suffering any apparent damage in either flavour or keeping afterwards.

**MARIE GUISSÉ** is a most delicious Pear, in use during February and March, but, unfortunately, it is not a success with me except on cordon trees. Bush trees in the open having been a complete failure for a number of years, they have been rooted out. In some other places I have seen this bear splendid crops, and where it is a success it should have a place in even small collections, being so valuable for its lateness and high quality.

**VAN DE WEYER BATES** is a variety that I made a note of last year as being a grand late Pear; fruit that I tasted in April was very rich and juicy, and the grower stated that the trees cropped profusely on the Quince in all forms. Not having grown this sort I cannot speak of its hardness or otherwise, but I have no doubt it would answer in cold districts against a wall.

W. G. C.

#### Gros Maroc and Black Hamburg Grapes.

—A reader of THE GARDEN writes me that Black Hamburg Grapes realise such a low price that he has decided to graft his Vines with Gros Maroc, and asks if it will not prove more remunerative. Many Grape growers have been disappointed at the low price of such fruit of late years, but in spite of low prices good bunches of Black Hamburgs, well finished, will sell at paying figures. I think most fruit growers will admit that this famous and highly popular Grape is not so well grown generally as it used to be, and purchasers will sooner pay more for highly-coloured Gros Maroc than for Red Hamburgs. The latter variety has advantages over its rival in becoming profitable earlier, and under good management producing a heavier crop. Gros Maroc is somewhat slow in getting established, afterwards acquiring almost too gross a habit; and although

started at the same time as Hamburgs in an early viney it is at least a fortnight later in ripening. There is also the question to be considered of how long the purchasing public will prefer showy Grapes at the expense of quality. According to my experience in selling to fruiterers the tide is turning, and Grapes of rich flavour are more valuable than they were two or three years ago. It is possible, therefore, that those growers who discard such a good all-round Grape as Black Hamburg for an indifferently flavoured variety like Gros Maroc may find they have made a mistake. If the former were better grown, by giving it more air and not so highly fed, also giving careful attention to other cultural matters, it would still hold its own amongst Grapes for all purposes. Some years ago I manured Black Hamburg Vines as liberally as Alicante and other varieties, but although the bunches and berries were large, the colour was not what it ought to be. Later experiments proved conclusively that less feeding was better, as shown by the deeper colour and beautifully hammered berries.—W. G. C.

**Peach Dymond.**—This Peach is fully deserving of all the praise that the several correspondents of THE GARDEN recently have bestowed upon it, and although as yet I have not tried it for forcing, I shall do so at the earliest opportunity. I have several trees in late houses, and it certainly has been looked upon in its season as one of the very best. It develops a splendid colour, and being a very firm fruit travels well, and its quality is first-rate. It has one failing with me in its susceptibility to the attack of aphides during the summer season. Each year as soon as the leaves commence active growth after the flowering period is past the fly appears on this Peach when other trees would be quite free, and syringing with an insecticide must be resorted to early to prevent its spread to other adjoining trees. Whether this is common to the variety in other gardens I know not, but I do not find any reference to this failing by other growers who have recently brought it into prominence. It would be interesting to know whether it is a general or only a local failing. Each of the four trees I grow has the same tendency, and this makes me think there is some inherent weakness in the variety, or the soil is deficient in some element necessary for its healthy growth. I get good crops yearly of the character described notwithstanding the attack, which is, however, in evidence only in its early stages of leaf growth. It is a splendid variety for open walls.—W. S., *Rood Ashton.*

#### MEALY BUG ON VINES.

IN a recent issue of THE GARDEN I notice "W. I." advocating scraping Vine rods infested with mealy bug. This, according to my experience, is superfluous, and generally admitted to be injurious. When I took charge of my present situation on November 1, 1888, I found an old lean-to viney so badly infested and in such a dilapidated state that I almost despaired of cleansing it. I first had the rafters, trellis, glass, and walls washed with a strong solution of soft soap and petroleum, and seeing the Vines had been rather severely scraped on previous occasions, I had them well rubbed with the hand, but no scraping was done, except about the spurs. They were then well scrubbed with soft soap and warm water, and afterwards dressed with a mixture of soft soap, sulphur, soot, and clay, with a wine-glassful of petroleum to a pint of water. The whole was allowed to simmer on a slow fire for twenty minutes, and applied in the usual way. The border (an inside one) was next cleared of all loose soil and top-dressed. Of course, nothing more could be done till starting the Vines. When the question of syringing arose, I decided to try how the Vines would break without it, as I could not see the sense of applying such strong insecticides and washing them off in a few weeks. When the buds showed signs of breaking a little heat was turned on, the evaporating pans filled, and a fair amount of moisture maintained without

syringing. I was pleased to see the Vines break remarkably well. Notwithstanding all the cleansing, in due course a few insects made their appearance. These were immediately destroyed by touching them with a small brush dipped in petroleum. The second year the same process was strictly observed with improved results, as only a very few insects appeared, which were destroyed as before. The third year the same process was maintained, when only two insects were discovered all the season. Since then, I am pleased to say, there has not been a bug in the house, and every year I see an improvement in both Vines and fruit (except two rods) viz., Lady Downe's and Gros Colman, which still show the effects of hard scraping and will never give satisfaction. I have no hesitation in attributing my success as much (or more) to the non-syringing system and strict watchfulness during the summer as to all the cleansing and dressing put together, and that without scraping the rods. R. R.

Belfast.

#### CURIOUS GROWTH ON VINE.

I ENCLOSE a sketch of part of the stem of a Bowwood Muscat Vine. As you will observe, there are a number of swellings between the spurs such as I have never noticed on Vine stems before. The Vine had all its natural bark on when sketched, and measured  $3\frac{1}{2}$  inches in circumference over the largest of the swellings in the sketch and only 2½ inches between the swellings. The Vines were planted in September, 1892, and carried a few good bunches last season. Theinery adjoining the Muscat house is planted in the same kind of compost, but there is very little swelling noticeable on the Vines. I should be glad of any information on the subject.—C. R.

\*.\* It is doubtful if a correct solution can be arrived at without first having a section of the affected rods to examine. Judging from the sketch furnished, the inner bark has been injured in some way and behaves in much the same manner as I should expect to find in the case of a stem of an otherwise healthy tree that has been attacked by either canker or American blight. When the bark is thus damaged or ruptured it frequently calluses and heals over, a swelling or circular ridge gradually closing over the exposed wood, and if the irritating cause of the wound is removed, the bark eventually unites all round, though there may be some dead wood underneath. The ridge or swelling would remain. All this might have been going on under the outer or dead bark of the Vines without "C. R." observing it, but if this is really the solution, he can easily verify it by cutting through one of the swellings. The question naturally arises, how is it possible for the live inner bark to be damaged in any way all the while it is protected by a thick covering of dead bark? It is not often that any injury is sustained by well-protected inner bark, but if petroleum has been used for either cleaning the roof or for syringing or dressing the Vines, this is apt to collect together, and is of such a penetrating nature as to be quite capable of injuring the bark of Vines on which it drips. An over-strong dose of other insecticides powerful enough when properly diluted to destroy insect life, is also fully equal to damaging the Vine rods, especially seeing how comparatively soft and porous these are. I am quite of opinion the swellings arise from some external cause, and not owing to anything being wrong at the roots. Naturally these swellings must greatly interfere with the steady flow and return of the sap, and will do so to a considerable extent as long as the rods are retained. This difficulty can most probably be obviated by a change of rods, and which can be done gradually or without the loss of a part of a crop even. Lay in young canes from near the lower part of the old rods, and stop these when about half-way up the house. Next year all or many of the spurs may be cut away from the lower half of the old rods, and the new rod be allowed to occupy the space and crop freely, also, in addition, extending to the top of the house. If

the Vines are in a healthy condition below as well as above ground, the young rods at the end of the second season's growth will be strong enough to fill the house, and the old rods should, therefore, be sawn off close to where the young ones started while yet the foliage on all is in a green state. If cut away directly the bunches are cleared off there will be no bleeding, but if deferred till the winter, it will be found a very difficult matter to prevent a wholesale loss of sap. If the swellings occur on the young rods, then it may be found necessary to make a wholly fresh start.—W. I.

**Two good stewing Pears.**—Those who require Pears for cooking will find Verulam and Gilgil two of the very best, the latter for early winter supplies and Verulam for spring use. Gilgil is one of the best flavoured of all the stewing Pears. It is a large round fruit, in season from October to December, and the tree does well on the Pear stock. Verulam is better known, and is little inferior in quality to the one described above. It is valuable on account of its keeping properties, and when cooked it is of excellent flavour and of a deep rich colour. Being a very large fruit it should not be grown on standard trees in an exposed position.—G. WYTHES.

**Apple Northern Greening.**—Cooking Apples are none too plentiful late in the spring, and the above is one of the best for keeping. I have seen many varieties recommended for keeping, but, so far, I have found few equal this, the quality also being good. It is not at all fastidious as to soils, doing well in standard form; indeed, it is a valuable market fruit if not gathered too early and given cool storage. I never attempt to keep this variety in the fruit room, it being stored in any out-building free of damp or rain-proof. I have kept heaps of this fruit in this way, as the skin being hard, it does not bruise badly. Old trees bear freely and do not like much pruning. I merely thin out the weak growth or cross branches about once in three years. In storing the fruit it is well to grade it, as the smaller fruits are not so valuable for keeping.—G. W. S.

## FERNS.

### VARIEGATED FERNS FOR THE CONSERVATORY AND COLD FERNERY.

WHEREVER Ferns are grown for their intrinsic value and not merely for house or indoor decoration, we usually find them planted out or at least arranged in a more or less effective manner, and according to the taste of their owners, either kept by themselves or intermixed with fine-foliaged plants. During the summer months, besides the variegated Ferns requiring a warm temperature, which may then safely be grown with the cooler ones, coloured Dracaenas, Begonias of the "Rex" section, Crotons, Pandanus, and numerous other fine-foliaged plants may with advantage be used for that purpose, but, although they may exist, these plants cannot at this time of the year flourish in a temperature varying between 40° and 50°, which is that allowed the majority of Ferns in cultivation, and with excellent results, as testified by the well-known ferneries at Nash Court, Faversham; Woolton Wood, Liverpool; Messrs. Veitch's at Chelsea, and many others, which retain their fresh appearance all through the winter months, although kept at a low temperature. But the monotony above stated may, and indeed is easily relieved by a judicious selection of Ferns distinct from all others by their variegated character, and forming a most pleasing contrast with the numerous sorts with foliage of various tints of green.

Variation is a characteristic almost exclusively peculiar to Ferns of exotic origin. Although in a list of British Ferns grown by Mr. P. Neill Fraser, of Edinburgh, and published by him in 1865, we find variegated forms of *Asplenium Adiantum-digrum* and *fontanum*, as well as variegated forms of *Athyrium*, *Blechnum*, *Lastrea Filix-mas*, *Polypodium vulgare*, *Polystichum angulare*, *Pteris aquilina*, and *Scelopendrium vulgare*, it is very doubtful whether in these cases the variegation was anything particularly striking, or whether it was sufficiently constant and showy to increase the decorative value of the plants affected by it when under cultivation. As these plants are now very scarce, if existing at all in any of our collections, we are justified in coming to the conclusion that, had their variegation proved permanent and ornamental, these plants, which owing to their hardness could be grown without trouble, and especially without the expense of glass structures and heating apparatus, would not have been allowed to drop into oblivion, and we conclude that either their variegation was insufficiently distinct to add to their beauty, or that they did not reproduce themselves freely either from spores or from division. Fortunately, such is not the case with Ferns of exotic origin, all or nearly all of which reproduce themselves as truly and as abundantly as the typical forms with green foliage.

Variogated Ferns either for stove or greenhouse may be divided into three series: (1) Those with bright variegation which were introduced into European gardens from abroad, and of which *Pteris cretica albo-lineata* may be given as a type; (2) those produced in cultivation, of which *Pteris Mayi* is one of the most distinct; (3) those Ferns in which the variegation consists in the contrast of light green-coloured lines or patches on a naturally more or less dark background. The most distinct, as also the most useful, of this series is the deservedly popular *Lastrea aristata variegata*. If, for the purpose of simplifying their culture, we classify together all these plants, for which a temperature of 40° to 50° is sufficient in winter, we will find that although the list does not include those species with the most brilliant colours, it, however, contains the most popular and most useful variegated kinds. It is well known that in really well-variegated Ferns the character referred to is, with scarcely any exception, faithfully reproduced, and it is important to note that amongst exotic kinds the variegation, when fixed, is constant. Accidental variegation, however, is also occasionally met with among exotic Ferns of warm and cool temperature, principally among *Cyrtomium*, *Doodia*, *Lomaria*, and *Nephrolepis*, in which portions of fronds are more or less streaked and splashed with either white or creamy yellow, and it is quite possible that by careful selection we may eventually find the variegation in some of these plants permanently fixed, although it is not always the case.

When visiting Messrs. J. Veitch and Sons' nursery at Chelsea I recently noticed young plants of a very prettily variegated form of the semi-hardy Japanese *Lastrea atrata*, which, I was told, was raised by Mr. H. B. May, of Edmonton. This new-comer apparently possesses all the qualities for which the typical green form is so much appreciated. At the same place I was also shown a very prettily and regularly variegated frond of the justly popular *Doryopteris palmata*. This, however, is not yet entirely fixed, a small percentage only of the seedlings possessing the variegated character. The same may be said of a splendidly

variegated form of *Pteris serrulata cristata*, which forms a bushy plant of compact habit, each frond well crested and well variegated. These two last plants were raised by a Continental nurseryman, who, being a keen observer, does not give any stray seedling the chance of disappearing and being lost to Fern amateurs.

If we take variegated Ferns according to their decorative value, we may—as the best one of those adapted to cool culture—give first place to the beautiful

*PTERIS CRETICA ALBO-LINEATA*, which may reasonably claim to be the most distinct and useful of variegated Ferns, and the value of its decorative qualities is sufficiently shown by the enormous quantities of it which every year, and in all sizes, pass through our London markets. This Fern is usually considered a native of Japan. In contradiction to this, however, Lowe, in his excellent work, "New and Rare Ferns," published in 1871, says (p. 39): "It was introduced into England in 1860, having been received from the Botanic Gardens of Java." He also adds that some hundreds of plants of it had been raised at the Royal Gardens, Kew, from spores, and that every one was quite true, not a single normal green frond being found among them. It is also stated in the "Synopsis Filicum" that it had been gathered in Brazil by Dr. Glaziou. A thoroughly distinctive character of this variety lies in the great dissimilarity of its barren and fertile fronds. The former, forming the body of the plant, are broad and of a somewhat spreading habit; whereas the latter, much narrower in all their parts, are erect and well above the others, thus giving the plant a highly ornamental appearance. But it is the beauty and clearness of its variegation and its hardiness which no doubt has secured a well-deserved popularity for this remarkable Fern, which is particularly well adapted for the decoration of the dwelling-room, where, provided it receives careful treatment, it remains for a long time in perfect health, the broad silver bands which occupy the centre of its fronds and the bright green colour peculiar to their edges being extremely attractive. In

*P. CRETICA MAYI* we have a home-raised crested and also beautifully variegated form of *P. cretica* in which the dissimilarity of fronds, although very conspicuous, does not form a distinctive character. Although in this case the variegation is of equal brilliancy, the fronds are nearly uniform in size, and instead of standing erect, all the fertile ones partake more or less of the spreading character which in the typical plant is peculiar to the barren fronds, forming a plant of compact growth and habit similar to the several known crested, but green forms of this essentially decorative species. It also reproduces itself true from spores.

*P. c. NOBILIS VARIEGATA*, also a home-raised variety, differs from the preceding in its more compact and stiffer habit, the barren and fertile fronds alike being borne on stiff stalks of a brownish colour. Their leafy portion, also more important than in *P. c. Mayi*, is all undulated, of a bright green colour along the edges, with a broad white band in each leaflet, forming a striking and most pleasing contrast. Among the plants of larger dimensions equally well adapted for culture in the cool house we have

*P. MEMORABILIS VARIEGATA*, whose fronds, 20 inches to 24 inches long, are rendered very attractive by the centre of each of their numerous pinnae being of a bright pinkish colour, gradually, however, fading into white, a colour which they retain as long as they remain on the plant.

*LASTRÆA AKISATA VARIEGATA* is a plant of Japanese origin and a very handsome Fern, which needs no further proof of its excellence than the great esteem in which it is held by the public as a plant of first-class quality for indoor decoration. The variegation of its handsome leathery fronds, 18 inches to 24 inches long, is very effective. It consists of a pale green or whitish band running

all along the centre of each leaflet on a dark shining ground. It is worthy of notice that this variety reproduces itself freely and quite true from spores, and also that, although the contrast between the colours of the centre and of the sides of the leaflets is much more conspicuous in specimens which have been subjected to a little heat, this plant succeeds admirably in the greenhouse. Its constitution and the nature of its fronds render it one of the most enduring of all cool Ferns. It is even perfectly hardy in several favoured counties and remains outdoors uninjured through the winter in Cornwall, Devonshire and Somersetshire. In

*ATHYRIUM GORINGIANUM PICTUM* OR *TRICOLOR* we have another Japanese Fern of medium size, as hardy as the preceding one, but of a deciduous nature. Its fronds, which are abundantly produced from a fleshy underground crown, are very graceful, though very brittle, and particularly striking on account of their pretty elaret-coloured stalks, which form a most pleasing contrast to the bright grey colour of the leaflets disposed on each side. These are furnished throughout with a central white band running the whole length of the frond, and is as effective as in the better-known *Pteris tricolor*.

*DICTYOGRAMMA JAPONICA VARIEGATA*, a very distinct and hardy Japanese plant, may also be classed among variegated Ferns, for, when freshly developed, its fronds, which are produced from a thick, fleshy, underground rhizome, show unmistakable signs of variegation, which, however, gradually disappear as maturity is attained.

It would be most interesting to know whether some of the variegated forms of British Ferns which were best known some twenty-five or thirty years ago are still in existence, and, with a view to helping in ascertaining where they may now be found, I will here give short descriptions and a few particulars respecting their habitats, &c., according to E. J. Lowe's authority, as given in his excellent work, "Our Native Ferns."

*ASPLENIUM ADIANTUM-NIGRUM VARIEGATUM*, so named by G. B. Wollaston, is said to be a beautiful variety, normal in outline, its fronds being striped symmetrically with white. It was found in Yorkshire and in Guernsey by the late Mr. C. Jackson.

*POLYPODIUM VULGARE VARIEGATUM*.—Of this, two distinct forms were said to exist formerly in British collections: one with sharp pointed fronds, pretty distinctly striped with yellowish white stripes, found at Oldstead, Yorkshire, by Mr. C. Monkman, of Malton, and another found near Cark, Lancashire, by Messrs. Stansfield. The fronds of this form, nearly normal in outline, are of a leathery texture and marbled above with yellow blotches. Neither of these Ferns, we are told ("Our Native Ferns," vol. i., p. 53), proved constant under cultivation.

*SCOLOPENDRIUM VULGARE VARIEGATUM*.—Several forms of this plant have been known in collections, the principal ones being variegatum Claphami, a dwarf plant found by the late Mr. Clapham in North Yorkshire. Its fronds, normal in size, but slightly dilated at their extremity, are sometimes beautifully variegated with white. Another form called variegatum Willisoni, also a native of North Yorkshire, is also of dwarf habit, and its fronds are variegated with yellowish white. In both cases, however, the variegation is given as "only sub permanent." According to Lowe, *S. fissum* variegatum and *S. variegatum crenatum* are, or were, two handsome forms: the former with fronds narrow at the base and wide near the summit, but becoming rapidly acute to the tip, and differing from *S. fissum* only through its being variegated; the latter, a very fine variegated form of *S. crenatum*, with fronds forked at their summit and about 7 inches in length. The best variegated form of the common *Hart's-tongue*, however, appears to be the one named after its fortunate discoverer, Mr. Elworthy, and

is described as a "handsome, permanent variety, of a normal form and much variegated."

*POLYSTICHUM ANGULARE VARIEGATUM*.—The soft Shield Fern has also produced several variegated forms, which are described in Lowe's excellent work as having been in British collections. One found near Littlehampton, Sussex, called variegatum pramorsum, has its fronds furnished with pinnae of various dimensions and forms and pinnules spiny-toothed and very irregular. Another form named variegatum-eristatum, originally found near Southampton, has fronds normal in all their parts, except that their summit as well as the extremity of their pinnae are crisply tasselled; while another called variegatum-eristatum, and found in the Isle of Wight, has fronds 12 inches to 18 inches long, with thick, narrow, undulate pinnae and crisped pinnules. In these three varieties, all of which have been discovered by Mr. G. B. Wollaston, of Chislehurst, the whole plant is said to be beautifully variegated with cream colour during the spring and early part of the summer, but whether the variegation is conspicuous or not during summer and autumn is not stated.

Besides the plants above described there are several other well variegated Ferns, such as *Pteris argyrea* and *Victoria*, *Adiantum cuneatum* variegatum and *macrophyllum albo-striatum*, and others, but although these may exist under cool treatment, it is well known that they do not really flourish unless they are subjected to a warmer temperature. With the exception of *Athyrium Goringianum pictum*, which loses its foliage during the winter, all the above named plants will help to relieve the monotony of the cold fernery at this time of the year, as a temperature of 40° to 45° is all they require, especially when they are planted out, for we may here call the attention of intending cultivators to the difference in point of hardiness between the plants grown in pots and those planted out. The latter possess over the former a great advantage, inasmuch as their roots, even if only a few inches below the surface of the soil, are protected against the action of cold; whereas the roots of the plants grown in pots are readily affected by the more or less sudden changes of temperature from which the delicate texture of the extremity of the roots in immediate contact with the pots cannot fail to suffer. It may be safely asserted that a Fern which thrives in a winter temperature of 40° when planted out requires when grown in a pot 45° to 50° to grow equally well; hence the obvious advantages of the planting-out system. DOODIA.

*Adiantum Farleyense*.—This beautiful Fern is not grown nearly so much as it deserves to be. Many gardeners find it a difficult subject to grow well, and some make the mistake of potting it in the ordinary compost for Ferns, viz., peat, loam, sand, &c. The former it does not like, but it will do well in good yellow fibrous loam, rough leaf-mould, and some coarse silver sand, with a few lumps of charcoal. Some recommend a little bone-meal to be added, but I never use it, preferring to give the plants liquid manure as soon as the pots get full of roots. The pots should be well drained, never allowing the plants to suffer from want of water, and never syringing overhead. Plants that are not satisfactory should be turned out of the pots as soon as growth commences, split up into single crowns and placed in 3-inch pots, moving into 5-inch pots as soon as the small ones get filled with roots. These will make nice little plants for house decoration in the autumn. I have some here now in 5-inch pots that were treated exactly as I have described with from twenty to thirty fronds on a plant. Many of the fronds are 20 inches in length. The temperature of a plant stove suits it well.—C. R. C. W.







GARDEN FLORA.

PLATE 1000.

LILIAM BROWNI AND ITS VARIETIES.

(WITH A COLOURED PLATE OF L. BROWNI LEUCANTHUM.\*)

THE *Liliums* of China and Japan have given the botanist a great deal of trouble owing to their



*Lilium Browni*, showing growth.

been calling *L. Krameri*, so that we had to fall back on the next oldest name for the present plant, which is *L. Browni*.

We are not now concerned about *L. Krameri*, but it is satisfactory to know that *L. Browni* of 1845 is still *L. Browni*, and that the picture in *THE GARDEN*, Vol. XXIX. (1886), p. 350, is *L. Browni* true, and not *L. japonicum*. In *THE GARDEN*, Vol. XLIII. (1893), p. 41, there will be found a most interesting account of the *Liliums* of China and Thibet, which is a translation of a paper prepared by M. Franchet and published in the French journal of botany. M. Franchet's description of *L. Browni* may fittingly be quoted here:—

*L. Browni*.—A Chinese species found in the island of Chusan (the home of *Chamerops Fortunei*); also on the hills around Kiu-Kiang, in the province of Kiang-si, Ichang, &c. It exactly resembles *L. longiflorum*, but its flowers are larger, being from 6 inches to 8 inches long in wild specimens, and the divisions of the perianth are tinged with violet (red-brown) on the exterior. The most reliable distinctive characteristic of *L. Browni* is the presence of a more or less dense down of small papillose hairs on the margin of the nectariferous furrow, and on the filaments of the stamens and frequently on the style.

*L. Browni* is not a popular Lily in England, because it cannot be established as we can establish, for instance, *L. auratum* or *L. speciosum*. It is, however, often imported in quantity, and finds ready customers among those who know its beauty and who are satisfied with the truly rich display it rarely fails to make the first year. It winters badly with us, no matter how one treats it. The most successful method I know of is to lift the bulbs in late autumn and keep them in a cold frame, burying them in new cocoa-nut fibre or light peat and sand till February.

Dr. Henry states that in Ichang, where it grows wild amongst the mountains, *L. Browni* produced, when well cultivated, as many as fifteen flowers.

*VAR. LEUCANTHUM*.—This is the third good garden Lily that we owe to the zeal of Dr. Augustine Henry, F.L.S., who held a post in the Chinese Imperial Customs till recently, and who during his stay in Ichang, in the exact centre of China, collected largely in the interests of botany. In 1889 he forwarded to Kew a small box of *Liliums*, and from these have flowered the beautiful *L. Henryi*, of which a coloured plate with the history of the plant was published in *THE GARDEN*, Vol. XL. (1891), p. 422; *L. Browni* var. *chloraster*, described below, and that represented in the plate herewith. This is a distinct and beautiful Lily, undoubtedly a form of *L. Browni*, the bulbs, habit, foliage, and other botanical characters being the same, but from a horticultural point of view it is greatly superior in its good behaviour under cultivation, that is so far as experience with it at Kew goes to show its character as a garden plant. It differs from all the other forms of *L. Browni* in having

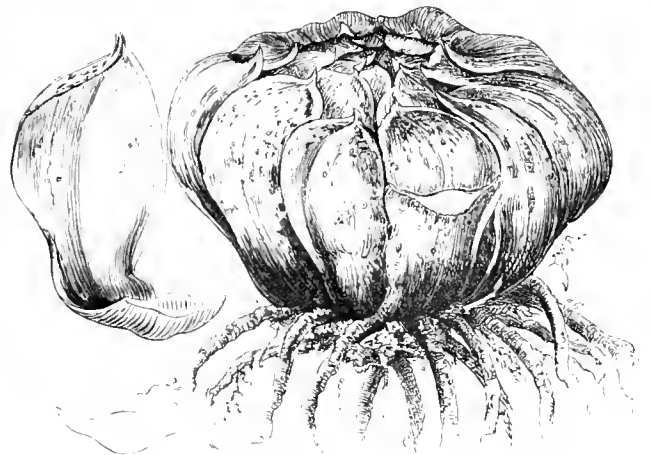
white flowers, shaded a delicate yellow on the lower part of the segments inside, and in the broad base of its tube. It was planted in a bed outside at Kew in 1891 and left in the ground without protection till it flowered last year. The bulbs when they arrived in 1889 were no larger than chestnuts; when lifted a short time ago some of them were as large as a man's fist. When in flower last August the tallest had a stem 4 feet high, green, the largest leaves 4 inches long, an inch broad, with three distinct nerves, those near the flowers being much shorter and ovate in form. The characters of the flowers are well shown in Mr. Moon's drawing; the largest were 6 in. long and the inner segments were over 2 in. wide, the reflexed portion of the segments comparatively short. Mr. Wallace, of Colchester, agrees with me that this is one of the finest of Eastern *Liliums*.

*VAR. CHLORASTER*.—This plant first flowered in the open air at Kew in 1891, when it was described by Mr. Baker as "a well-marked variety of *L. longiflorum*, with flowers resembling *L. Browni*." He shortly afterwards identified it as a form of *L. Browni*, and described it in the *Gardeners' Chronicle* in August, 1891, under its present name. It came, as already stated, along with *L. Henryi* and the plant herewith figured. In stature and general appearance it resembles the variety *leucanthum*, from which, however, it may be distinguished by its brown-tinted stem, narrower leaves and less nodding flowers. As its name signifies, it has a green tinge along the keels of the segments, which is broadest and most conspicuous inside the flowers. Until *leucanthum* flowered, we thought *chloraster* a first-class Lily. In its behaviour out of doors it has been quite as satisfactory as *leucanthum*. It may be worth recording that a good judge of *Liliums* suggested that these two varieties may have originated from a cross between *L. Browni* and *L. auratum*.

*VAR. OBOVATUM*, which was first described by Planchon with a figure in "Flore des Serres," t. 876 (1853), is now recognised as a variety only of *L. Browni*. It was figured in the *Botanical Magazine* in 1813 (t. 1591) as *L. japonicum*. It differs from the type in having a whitish or yellowish bulb (in the type the bulb is brown), narrow scales, green stems, thinner, less glossy leaves, and the flowers, which are smaller, are not so much tinged with red-brown. It is rare in gardens.

*VAR. PLATYPHYLLUM*.—Mr. Baker found among the specimens collected by D. Henry those of a *Lilium* with flowers like those of *chloraster*, but with anthers 1 inch long, whilst the stem was only 1 foot long, though the leaves were broader. It may be among the bulbs received at the same time as *L. Henryi*, &c., as some of them have not yet flowered.

*VAR. VIRIDULUM*.—This was introduced and flowered by Mr. Ware, of Tottenham, and described



Bulb of *Lilium Browni*.

multiplicity of forms, the result of long cultivation in the gardens of China and Japan. These cultivated forms have been introduced into Europe, and when they come to be compared with each other and with their progenitors, the wild types, it is not easy to classify them. This accounts for the error that was made in regard to *L. Browni*. Some time previous to 1845 a Mr. F. E. Brown, nurseryman at Slough, flowered a *Lilium* which he named after himself and distributed. Botanists, however, decided that it was *L. japonicum*, a species described by Thunberg, the Dutch botanist, many years before, and this view was accepted until lately, when the French botanist Franchet pointed out that true *L. japonicum* has pure white, open, cup-shaped flowers and lanceolate, distinctly stalked leaves, and probably has never been seen alive in Europe. Mr. Baker, of Kew, has arrived at nearly the same conclusion, but he recognises Thunberg's plant in what we know as *L. Krameri*. He wrote in 1891:—

We used to think that this (*L. Browni*) was the *japonicum* of Thunberg, but when Mr. Elwes was preparing his monograph the authorities of the museum at Upsala kindly lent us Thunberg's type specimen, and we found, to our surprise, that it was not this species, but what we had

\* Drawn for *THE GARDEN* by H. G. Moon in the Royal Gardens, Kew. Lithographed and printed by Guillaume Severeys.

by Mr. Baker in 1885. It has very short, broad leaves, cream-coloured flowers, only slightly tinged with red-brown outside.

Cultivators of *Liliums* may here be reminded that many of the species will ripen seeds if the flowers are fertilised, and from these quantities of flowering bulbs may be raised in two or three years. There is a large batch of *L. Henryi* at Kew, some of which will probably flower this year, and they are only fourteen months old from Kew-ripened seeds. A similar batch of the rare *L. formosanum* was raised at Kew three years ago, many of which flowered when a year old. The bulb scales also may be utilised for propagating.

W. W.

## THE WEEK'S WORK.

### KITCHEN GARDEN.

**FRENCH BEANS.**—Fresh sowings of these should now be made, and, with lengthening days and increased sun heat, the yield will be better. In addition to Osborne's Forcing and Syon House, Newington Wonder and, where head room is plentiful, Canadian Wonder may be sown, small batches of each affording a succession, particularly if a little more heat is given to some than to others. The 6-inch pots may also now be replaced by those 8 inches in diameter, and the compost made a little stronger and richer than for the earlier lots. Six Beans in each pot are ample; therefore, when germinated reduce to that number. Crowding is ruinous. If a Cucumber or Melon pit can be spared, Beans do capitally in such positions, but the bottom heat should not exceed 75°, 70° as a maximum top heat suiting well. Where no other convenience exists than pits which have to be watered by removing the lights from the outside, I would advise sowing the Beans in 8-inch or 9-inch pots, and plunging them in the warm leaves and litter, as grown in this way the foliage is less rank and flabby, and suffers less from removing the lights for watering. When a good quantity of bloom has set, pinch the leads, in order to strengthen the plants and improve the crop. An effectual method of supporting Beans in pits is to place stout sticks at each end and in the centre of each row, and to carry thin twine from one to the other.

**PERMANENT SEAKALE BEDS.**—The crowns of these will now readily respond if covered first of all with Seakale pots, and afterwards with half leaves and half stable manure, not too decayed, treading the material well in between the pots, and allowing a top covering of at least a foot. A testing stick should be thrust in and examined occasionally. Where there are no pots the stools may be surmounted by stout stakes, bent over and secured at the tops, the heating material being piled round and over them. Rhubarb may also be forced in a similar way. Beds of Seakale intended to supply the last lot but one should also be covered with a good thickness of leaves, these being kept from blowing about by a layer of straw. Treated thus, growth will come on gradually, and be ready for cutting as soon as the pot-covered crowns are finished.

**PARSLEY.**—This is most in demand at the worst period of the year, and much forethought is requisite to keep up a supply in large places. If the roots which have been protected in pits or frames have been picked so closely that a scarcity is apprehended, large boxes may be filled with soil and the roots laid in thickly, the boxes being then placed in a temperature of 60°. Growth will soon follow, and a sufficiency be had until that in the pits again springs into growth. A few boxes may also be sown in heat.

**ONIONS AND LEEKS.**—Where extra large and early Onions are required, seed of such sorts as Cranston's Excelsior, Ailsa Craig, or the Wroxton may now be sown in heat. Boxes may be used, the seed being sown on a firm surface of good holding loam placed over a good layer of well decomposed manure, merely covering the seed and afterwards placing the box in a warm house averaging 60° at night, sprinkling with a fine rose or

syringe, and elevating them well up to the glass. Small pots, however, are preferable, sowing a few seeds in each, and leaving the most central plant in each pot when thinning out. They must be kept in heat for some weeks after germinating, being gradually hardened off in April. Leeks for producing extra large specimens may also be sown in the same way and treated similarly, using the richest soil obtainable, and only sifting that which covers the seed. A good strain of the Lyon cannot be beaten either for size or quality.

**SPINACH.**—A warm, sunny border should now be utilised for sowing a few rows of this vegetable, as it is very hardy and quickly germinates. This will be ready for gathering by the time the earliest sown winter batches are over. The latter can then be cleared off the ground, manure dug in, and another crop sown. A large breadth at this date is not needed, as Pea sowing will soon become frequent, and Spinach may then be sown between the rows. As soon as beds of winter Spinach are cleaned and hoed, a dressing of artificial manure should be given to assist growth.

**BRUSSELS SPROUTS.**—Seed for the production of very early sprouts, say at the end of September, may now be sown. In cold, exposed gardens, however, sowing should be postponed for three weeks later. Where the demand is small, a good-sized box will suffice for sowing the seed in, placing it in a warm greenhouse and eventually pricking out the young plants into larger boxes or in a frame on a mild hotbed. No better site can be selected for early Brussels Sprouts than that from which Celery has been dug. If this is trodden as soon as dry enough and retrodden previous to the plants being put out, the sprouts will be hard and of medium size, the reverse of what would be produced by a quantity of fresh manure. Later crops need more stimulants. Good sorts for early work are Northway Prize and Paris Market. Where Carrots are forced in frames the sprouts may be sown between the rows, and transplanted when of sufficient size.

**SPRING CABBAGE.**—Crops of this important vegetable growing in all but the heaviest soils may now be hastened on by the use of the Dutch hoe between the rows and by slightly earthing up the stems. On soils inclined to be cold, a sprinkling of guano applied broadcast before hoeing takes place will help the plants greatly, and on fairly warm soils any approved fertiliser will answer. All yellow and rotten leaves should first be removed, and if gaps through death or deformity abound, they should be made good by the use of an outside row, taken up carefully with a ball of soil attached, and planted firmly. As a safeguard, it is always well to sow a little seed of an early variety in a box or pan, as they often do good service, and if not wanted the labour is not much. Early Ellam's, Cocoa-nut, or Earliest of All are good and certain sorts for the purpose. Enough seed for a couple of rows of Enfield Market or Early Rainham may also be sown, this following the first named, and continuing in usable condition for a good time.

**CARDOONS.**—These will now come in well for a change, and will help out other things if a good quantity were stored away in a cool shed on the first appearance of sharp frost. Litter put over the plants in the open ground is sometimes depended upon, but it often proves useless and the Cardoons perish. I have seen them hung up by the heels in the Onion shed and remain sound for some weeks. These are impoverishing things and rather troublesome to grow, but if the seed is sown later in the season—say the middle of April—the plants attain to a very useful size and can be managed as easily as Celery. The seed is best sown in small pots and the plants grown on in warmth, afterwards hardening off and planting out with the ball intact. Feeding on a liberal scale when growing is necessary.

**COOL-GROWN RADISHES.**—A sowing of Wood's Frame or French Breakfast may now be made in a cold frame or pit in light friable soil. These will be ready for pulling by the time the supply from hotbeds and early Potato frames is exhausted. If a single light frame only can be

spared, mix the seed of the two varieties together, and so secure a pulling of each. Cover at night with long dry litter or Bracken and give no air, even during sunny days, till the young seedlings appear, when liberal thinning and abundant ventilation will be necessary. A sowing may also be made in a warm sheltered corner, and, if possible, on a slightly raised bed, sowing the same sorts and covering at once with litter. This must remain on until the Radishes appear, and then be removed each frost-free day, being again replaced each evening. Acres are thus grown in the neighbourhood of London.

**HARDY GREENS.**—The majority of Coleworts that were planted out sufficiently early to form good solid hearts will ere now have been cut, but autumn-planted batches, which will have to be used as ordinary greens, are yet numerous. As, however, after this date these are liable to bolt, the best plan is to lift them carefully and lay them in behind a north wall, in which position they will keep fresh and good for some weeks longer. The ground can then be manured and dug in readiness for Peas, Beans, or other early crops. As soon as the severe frost disappears, quarters of Scotch Kale should be gone through and all the lower leaves removed from the stems. This will induce fresh young sprouts to issue from every joint, these proving most useful during April when there is a scarcity.

**SPRING BROCCOLI.**—The past few weeks have been very trying to some varieties of spring Broccoli, these being often so damaged just beneath the crown as to prevent the heads from swelling to half their normal size. If they have not yet been protected by hay-bands or Bracken worked freely in amongst the stems it should now be done. Where heads of the Leamington Sulphur or Early Penzance have already grown to the size of tea-cups, lifting had better take place, removing them with stem and root to a cool shed and laying them in leaf-mould or other dryish soil and giving a slight top covering of dry littery material. These, though small, will prove most acceptable in the dining room. Where Cooling's Matchless is grown for March supply it should now receive some protection in a similar way.

J. CRAWFORD.

### FRUIT HOUSES.

**PINES—EARLY FRUITERS.**—A few of the strongest plants should be started, selecting those with thick stems and of good sturdy habit, placing them in a closer house or pit with more bottom heat. For this batch I prefer a small, close house with every provision for a nice genial heat. Admit every ray of light. The glass should be clean and new material placed in position for plunging, this being made firm. Should any doubt exist as to over-heating, place the plants on the surface, having trial sticks in the heating material to test warmth. Plunge the plants when the temperature is falling and the heat at about 90°. For reliable fruiting, Queens are the best for the time named, and those with a knowledge of Pines can readily judge the best plants. If kept at rest during the winter they often start or push up the fruit at once when placed in their fruiting quarters; whereas if kept too warm and growing they are much longer about. The plants have longer leaves, are often loose at the collar, and need more care in plunging. If at all loose, remove some of the lower leaves and top-dress the plants with large pieces of turfy loam, well ramming the material close to the stem. Should this fail, I have used a short stake at the base to secure the plant to, ramming the soil firmly. If bottom heat is supplied by hot water, the plunging is simplified and there is less fear of burning, as with fresh tan, leaves or manure. Even with hot water it is well to maintain a regular temperature, as fluctuations cause uneven growths, and the plants do not take regular supplies of moisture and food. As soon as the plants are well settled down, give liquid manure or guano water, but free from thick matter. Before applying manures, if the balls of the plants are dry, water with tepid

water and get the whole mass saturated before applying stimulants. The temperature of the house for the early fruiting plants should not be too high at the start, 70° being sufficient in most houses, with a rise of 10° by sun heat early in the day. The night temperature may be a few degrees lower, 65° being high enough in severe weather. To prevent excessive firing cover the outside glass with a warm covering at nightfall, and in fine weather increase the atmospheric moisture, damping all parts of the house except the hot-water pipes. Keep the moisture at this time of the year out of the hearts of the plants, and give more moisture in all parts of the house as the days lengthen.

**SUCCESSIONAL PINES.**—The cream of the plants having been picked out for early fruits, the successions will be left in an irregular condition. As these need less attention in the way of heat and moisture, it is not well for another month to force into growth. Any plants showing signs of starting may have the warmest position and a little more moisture at the root. It is not advisable to remove these plants if they can be kept quiet for a short time longer—rather have as many for succession as possible. The temperature should not be raised much, as at the time of writing the weather is very wintry. At the time these notes are penned, 60° at night are ample, and 65° to 70° by day. Ventilate during bright sunshine, with occasional dampings down. Strong suckers potted up early last fruiting season should be kept moist. These will not have rested during the winter, and will give a good return next August. If kept growing place them near the pipes, and with more moisture they will be in good condition to pot later on.

**GENERAL STOCK AND POTTING.**—Old plants should receive more atmospheric moisture, with a genial bottom-heat and a slightly raised day temperature if the weather is bright. Make preparations for potting. The strong plants will require a good shift, the largest into 10-inch or 12-inch pots. Get the pots in readiness, washing and placing them ready for use. Avoid using new pots if others well seasoned can be had. Well drain the pots, using clean crocks, and for the larger plants a special compost as rough and fibrous as possible for the larger plants. This should be placed in bulk under cover in the potting shed, so that it is in good condition by the time required. For small suckers smaller pots and finer material will be wanted, and should be got ready for repotting next month. As fresh heating material is needed in large quantities next month for both succession and other small stock, collect it into large heaps for the heat to go through the whole mass, turning it frequently to dry the materials. This does not apply to tan, but as manure and leaves are often used for small stock, it should be prepared as advised to get rid of steam and violent heat. Small plants may be kept from 5° to 10° lower than succession plants, but should any plants have got sour or are sickly, repot earlier than advised, having got both the potting and plunging material ready before beginning the work. Use plenty of drainage material in the soil to keep it open, and keep the pits close after potting, giving moisture sparingly at the roots for a time.

**STRAWBERRIES IN POTS.**—Another lot of plants should now be prepared for forcing, and as only few can devote a house to Strawberries, they have to be forced in a variety of ways. For forcing to fruit early in April there is no more reliable kind than *La Grosse Sucrée*, which forces well, as it often only produces a single well-matured crown, and the flower-stalk comes well out of the centre of the plant. The flavour is excellent, being very sweet. This variety does not make so much foliage as some others, and therefore the plants may be grown more closely together. I would also advise *Royal Sovereign* for early April fruits. The fruits are large, flavour brisk and luscious, and if required to pack for long distances, superior to *La Grosse Sucrée* in that respect. Plants placed in fruit houses at this date should be thoroughly cleansed before going on shelves,

also the foliage dipped to get rid of any pests lurking in the foliage. Use sulphur freely for the destruction of mildew. Very little moisture will be required at the start, but in fine weather syringe the plants overhead freely. The best results are obtained by allowing the plants a long period at the start. Any attempt to hurry them will end in failure; whereas forced slowly there will be a good return. Many can devote shelves in houses just starting to Strawberries, and treated thus they set well and finish little inferior to those in the open. The plants placed in a mild bottom heat late in the year will now be showing flower-spikes freely, and may be given more warmth, also a rise of 5° and as light a position as possible. Syringing must cease as the flowers expand, and in mild weather give a dink of air daily. At this early date fertilisation of flowers will be necessary. This should be done at midday in bright weather. Plants just coming into bloom should be fumigated several nights in succession, as this work cannot be performed later whilst in full flower. As soon as a good set is secured, reduce the fruits to eight or ten at the most, as more will not finish well. Syringe daily with tepid water, raise the temperature, and give weak liquid manure. To push on a few very early fruits of such kinds as *Vicomtesse*, which will do well in a moist house, after thinning, the plants will make quicker progress if moved into *Pine* stoves or houses with a temperature of 60° to 70° by day with more warmth. More food can be given till the fruits commence to colour.

**CUCUMBERS.**—The plants that have been giving winter supplies will be less vigorous now, and require every encouragement until the newly-planted ones come into bearing. Give rich surface dressings of bone-meal and soil warmed before placing on the surface, also liquid manure. As long as the plants send out new growth a supply will be maintained, but when this ceases it is useless to give food as advised. Rather hasten the succession plants, and by stopping at the earliest moment get a few fruits to form a succession. Another sowing should be made for later use, as often in private gardens there is a greater demand in the spring for Cucumbers, and as there is no advantage in growing exhausted plants, the house or pit in which the winter stock is will be available. Plants coming into bearing should not be allowed to carry too much fruit at first. They must be assisted frequently with rich surface-dressings, a steady bottom-heat of 80° and 65° to 70° at night, with a free rise of temperature by day, with a free amount of moisture in all parts of the house, hastening growth. If practicable, cover the glass at night to maintain warmth without excessive firing. At this date little air will be required if due attention be paid to moisture; indeed, cold draughts of air mean red spider, thrips, and green-fly. G. WYTHES.

## ROSE GARDEN.

### PLANTING OF DWARF ROSE STOCKS.

WHILE it is quite right to plant our hedge Briers for standards and half-standards during the autumn or early winter, I certainly think we are wiser in delaying the transplanting of dwarf stocks until the middle of February and March. Such at any rate has been the result of my experience and observations. Our standards have been more or less exposed to cold from their first growth in sucker form, but, although we propagated the cuttings of all dwarfs from wood equally exposed, they have been kept from light and weather influences during the whole period they were forming stocks. Nor, as a rule, has the wood utilised for stocks had any frost; certainly none of any severity where propagated at the most suitable time. This, then, combined with the more tender or softer bark formed beneath the surface soil, renders

our dwarf stocks rather susceptible to a severe frost. More especially is this the case with the *Manetti*, and I have frequently seen a bed of good stocks crippled by frost when planted in the autumn. The cutting *Brier* is a little hardier; so, too, are the seedlings; but, nevertheless, I prefer spring to autumn planting of all dwarf Rose stocks.

A hint or two upon these is suggested by a complaint from a friend that small seedlings had been forwarded to him, whereas he required some fit to work upon during the coming summer. A two-year-old seedling of the thickness of a small knitting-needle is most suitable, but they may be of less diameter than this, and still swell quite sufficiently to be safe for the majority of *Teas* and *Noisettes*, also for the smaller of the *Hybrid Perpetual* buds. It is during the last few weeks of July and August that they swell so rapidly, and a summer shower makes a vast difference. If we plant stocks of seedling Briers that are large enough for budding now, say about the size of a lead pencil, they are almost sure to be much too stout for *Teas* to be worked upon with any safety. A coarse stock, particularly one that continues to swell so long after the bud is inserted, is apt to smother the latter. Cut off the tips of the longest roots of these, and do not fear to serve all stocks in the same way. A seedling treated thus is little inferior to a well-made cutting *Brier* stock.

In planting, we must take into due consideration the class of Rose we intend working. If it be some dwarf and close-growing variety like *Catherine Mermet* or *Devoniensis* from the *Teas*, *La France* and *Augustine Guinoisseau* from the *Hybrid Teas*, or *Louis Van Houtte* and *Marie Baumann* in the *Hybrid Perpetual* section, then a distance of 9 inches in the row, with the latter 3 feet apart, is ample. But we need double the space for *Gloire de Dijon*, *Rêve d'Or*, *Margaret Dickson*, and others, taking care to give a mid-way position to the ordinary growers. Dwarf stocks made from cuttings are best planted as shallow as we possibly can, so that they will remain upright. Then choose the first opportunity when the soil can be worked easily to draw it up to and around them in the same manner as cultivating *Potatoes*. This not only supports them, but we can so easily get the bud upon the crown of the root in due season. The raised soil is easily removed, and we also find the underlying bark of the stock in a softer condition for working, and not so liable to split when inserting a bud of large size. R.

### AMONG OUR INDOOR ROSES IN FEBRUARY.

IN all cases, even in unheated houses, this is one of our busiest months. It is with the main batch of our pot Roses that I wish to deal at present, and here we are certainly at the most critical period of their existence unless they are more than usually backward. All of them have growth, many already showing bud, and others coming into bloom. This week I was looking over a garden where pot Roses are not so well done as they should be, seeing every facility of heat, room, and labour was available. No wonder that many condemn a pot Rose as producing only an occasional bloom of presentable appearance in cases where they are neglected in the present stage. Once allow insects to gain a hold, or only once give the plants that disastrous check which is the outcome of those extreme measures one is sometimes tempted to use in exterminating insect enemies, and we may look for an annoying failure with

the present crop of bloom. Nor should we be too generous with liquid manures. We are apt to look upon Roses as particularly hungry plants. This is correct enough, but we must not forget that we have given them a highly concentrated food in the rich potting soil used; therefore, to supply liquid manures freely and before the roots have been able to take up any appreciable quantity of the food in the soil is not a wise proceeding. Allow the new roots to work into this in the healthy and free way they delight in doing, and leave liquid manures for plants in partially exhausted soil, and also as a sustaining aid to strong growth later on.

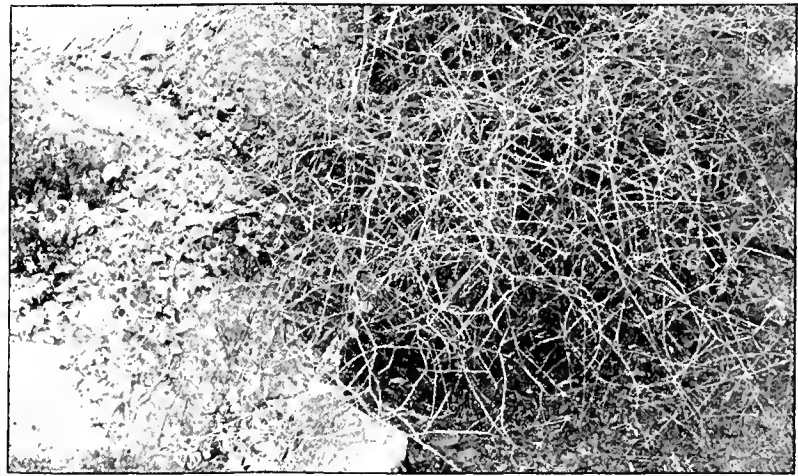
Sudden changes of temperature are another source of many failures. It is somewhat difficult to ward against this. On January 25 and 26 we had very keen winds and no sun; the following morning (Sunday) there were about 15° of frost. Now this was immediately followed by a bright and clear sunshiny day; consequently, the house with barely warm pipes was up to a temperature of 80° and 90° by 11 o'clock. Air could not be afforded, as the wind was uncertain, and a draught of that kind was almost sure to start mildew. All we could do was to keep the place moist and the pipes as cool as possible; in fact, the fire was allowed to go out. It was difficult to keep the temperature high enough at night and early morning, also upon more than one occasion during the previous few days, and then in the space of a few hours we find an equal difficulty in keeping the heat sufficiently low and avoiding the inlet of any cold air. We cannot hope, nor do we need, to keep up a uniform temperature; but Roses in full growth and tenderness cannot be subjected to extremes with impunity. Some of us, I fear, are too anxious to see our plants entirely free from insect enemies. It is very nice to have them so, but I venture to say we can hardly secure this and avoid over-doing them with liquid insecticides or fumigation. Insects spring from all quarters and at almost any time, and while we are right in endeavouring to keep them away entirely, I fear we often err almost as much in this respect as by allowing them too long a spell of peace. If we use the syringe judiciously and a weak insecticide, there is little fear of insects gaining any seriously injurious hold. I am not now alluding to scale; this must be exterminated, or at any rate stubbornly battled against, and no time is more favourable than while the wood is dormant. When young growth has commenced we can seldom deal with scale effectively. To give a check, whether by atmospheric extremes, mistakes in watering, or when cleansing our plants, has far more to do with the dropping of buds, their turning black as soon as visible, and also failing to appear upon well-matured wood than many apparently realise, if we are to judge by the treatment accorded in many private gardens. Another error of no mean consideration is too great a hurry during the first breaking of new growth. We must wait for the roots to come along in due order, more especially when the plants are turned out of pots. In pots all of the plant and soil are subjected to the same influence of heat, and for this reason will stand rather sharper forcing. R.

*Rosa camelliæflora* has been on my west wall ten or twelve years and never bloomed till 1894. I should not have had patience enough to keep it so long but for the beauty of its evergreen shiny foliage. It is now 10 feet or 11 feet high. Mr. Ellacombe maintains that it is the Cherokee Rose (*R. sinica*, *B.M.*, 2847), but the leaves of that are strongly serrated. Mine, which I enclose, are smooth and the blooms more cup-like.—G.

## TREES AND SHRUBS.

### RUBUS AUSTRALIS.

THE Brambles are essentially plants of the northern hemisphere, and although common on the mountains of the tropics, very few reach the temperate regions of the southern world. In New Zealand several of our European species have become perfectly naturalised, amongst which are *Rubus laciniatus*, one of the most beautiful of all Brambles; *R. leucostachys*, pubescens and discolor, the last of these having invaded every part of the colony. The only species, however, truly native of New Zealand is *Rubus australis*, the subject of the accompanying illustration. It is a species of particular interest, being, in the first place, one of the largest, perhaps the very largest of all Rubi. In its native country it climbs to the top of the loftiest trees, often, according to Sir J. Hooker, associated with a climbing Fern—*Lygodium*.



*Rubus australis*. From a photograph sent by Miss Hunt, Southfield, Paignton, Devon.

Another feature of interest in connection with it is its extreme variableness. So far as the foliage of its different forms is concerned, it varies from a practically leafless condition to one possessing a wealth of lustrous deep green leaves of large size. It is not strictly correct, however, to speak of it as "leafless," for the leaves are always there, being made up of three, five or more leaflets; but in the particular variety alluded to (and the one represented in the engraving) each leaflet is reduced to a long spiny petiole and midrib, terminated by a small lanceolate blade a quarter of an inch to 1 inch long. In other varieties the leaflets are of ovate outline, usually more or less cordate at the base, some measuring 2½ inches in length and 2 inches in width, others as much as 4 inches long by one-fourth as much in diameter. The margins are always coarsely serrated and the under surface frequently pubescent. The stem is occasionally quite smooth and never so formidably armed as the petiole and midrib of the leaf, which are thickly set with recurved prickles, these serving the double function of protection and support.

I am not aware of this *Rubus* having flowered in this country. Perhaps it has, but its flowers

are borne in large branching panicles and they are small (less than half an inch across), either white or faintly pink-tinged and fragrant. They are also unisexual, the male flowers being distinguished by a conspicuous ring of numerous stamens, which are almost absent in the female flowers. The species is spread over the North and Middle Islands, occurring most abundantly on the borders of forests. It is one of the plants known to the colonists by the name of "lawyer," and the Maori name is *Tataramoia*.

So far as the larger part of England is concerned, it cannot be described as strictly hardy. It may on a sunny wall be grown for some years, but sooner or later a frost comes which is too much for it. It is perfectly at home on the south and west coasts and in similarly favoured places. With Canon Ellacombe at Bitton it is, I believe, a great success. A plant on a south wall at Kew, which got to be of good size, was killed a few winters ago. It is now replaced by a smaller one, and is also represented in the large temperate house. It is indeed in winter gardens and cool conservatories that it will in most parts of the country have to be grown. Planted at the foot of a *Panax* or other New Zealand tree and allowed to grow over it, a cha-

acteristic bit of the native flora might be reproduced. W. J. BEAN.

## KITCHEN GARDEN.

### BROAD BEANS.

As early in February as the ground can be got into a free working state the first sowing of Broad Beans ought to be made. Better, however, wait till the middle of the month or even later if the soil cannot be got into a suitable condition before then, as seed that is puddled in thus early cannot be depended upon to germinate properly, and even if the plants did come up fairly well they would make but poor progress. If wanted extra early, then by all means try to have them ready for use as quickly as possible, even if this means the adoption of the very old plan of raising enough plants in pots under glass for a few short rows, hardening off and planting these out before they become badly root-bound. As a rule, though, Broad Beans are not greatly esteemed at the tables of the wealthier classes, one or two dishes being about

all that are asked for. Consequently it scarcely pays to take so much trouble with the early crops nor to devote valuable space in sheltered borders to their culture. If any are grown in such positions, then it ought to be a dozen or rather fewer short rows of Beck's Dwarf Green Gem. This variety may not be quite so early as the Early Long-pod, but it is altogether superior to it in point of quality and of a size and colour that find most favour. Very few owners of medium-sized to large gardens will tolerate fully grown Beans of the Long-pod or Broad Windsor types on the dining-table, and if they have them at all they must be small or very young, and when gathered and cooked thus early they are of a flavour that working men would consider decidedly objectionable. In Beck's Green Gem we have a dwarf spreading variety that produces small pods filled with green seed very freely, and these when properly cooked and served are not far removed from good Peas in point of quality. A distance of 2 feet apart is ample space between the rows, and the seed may be zigzagged in rather broad drills, a distance of 4 inches apart being then enough for the plants. For the dining-table or for my own use I would prefer to grow this variety for the successional and midseason supplies, sowing the seed on ground sloping southwards early in March, and more again, but in a cooler position, directly the last sown are showing through the ground. By the time the plants from the third sowing had ceased to produce there is every likelihood of enough of that class of Beans having been had for one season, but if late dishes were desired, more seed could be sown early in July, ridges between trenches intended for late Celery answering well for this crop, a single row being sown through the centre.

As it happens, my old favourite is far from being generally grown, and we will next discuss the merits of the few varieties that do find favour. As before stated, Early Long-pod is the earliest Bean I am acquainted with, and the best strains of this variety are remarkably prolific. A selection I once had from Mr. D. Thomson, and which he found the best at Drumlanrig, produced pods with the greatest freedom. They were scarcely large enough to please an exhibitor, but the lower ones touched the ground, and the haulm cropped to a height of 3 feet. The seed is moderately large and the quality good. Seville Long-pod is also early, and the pods are finer than those of the variety just mentioned, but they are far too sparingly produced, and, therefore, the variety is unprofitable. The Mazagans are later, but very hardy, the reason why they are so often recommended for autumn sowing. Leviathan or Aquadulee are more remarkable for the great length of pod they can be made to produce than for any other good quality possessed. Of the shorter-podded varieties, or Broad Windsor type, I prefer the Harlington Green, a slight improvement apparently on the old green form. In point of colour and quality, too, I think the green-seeded varieties are decidedly the best, but the white-seeded forms are also largely grown, both sorts succeeding better in hot weather than do the Long-pods. In each and every case there should be no leaving the pods hanging long enough for the base of the seed to become grey, and that whether the skins are slipped off before or after cooking or not.

Broad Beans fail quickly on hot, non-retentive soils. What they require is a good depth of moderately rich, strong soil, clayey loam suiting them well, though not if in a very lumpy condition at sowing time. Single rows of moderately strong growers may be disposed 2 feet

apart, the seed being sown sufficiently thickly to be sure of plants being eventually left 4 inches apart: but many still prefer the old plan of sowing in double drills. These double drills are drawn 4 inches apart, 3-foot intervals being allowed between them, that is to say, from double drill to double drill. In this case enough seed should be sown to be sure of having plants 6 inches, or rather less, apart in each line. Early in the year the seed need only be covered with 2 inches of soil, but later on they ought to be from 3 inches to 4 inches deep, or otherwise dryness may prevent or hinder germination. Three or at the most four successional sowings, the second being made before the first sowing is just coming through the ground and the others after the preceding sowing is showing, are usually ample. Very few growers can afford to water their rows of Beans during dry weather; they do not pay for the trouble, in fact; but the rows ought to be early and heavily moulded up, a mulching of manure further serving to conserve the moisture in the ground. As a rule, the moulding up—somewhat after the manner soil is drawn up to the haulm of Potatoes—is all the steadying required; but if extra fine straight pods are desired, then it pays to thin out and stake some of the plants, the best shaped pods only being reserved on them. Topping Broad Beans hastens the pod-filling and also gets rid of a plentiful crop of Beau aphid that usually collects at the point of each growth. W. I.

**Preparing for Onions.**—In getting the ground into order for this important crop two things must be borne in mind—a rich larder and a free admixture of something to prevent the inroads of the Onion maggot. Where time and labour are plentiful I would certainly advise discarding the ordinary plan of trenching, preferring to take out a very deep cavity at one end of the plot, and wheeling the soil to the opposite end, afterwards laying on rich manure in plenty, mixing therewith plenty of soot. Well work this in from top to bottom as the work proceeds, throwing the soil forward continually to the depth of the original trench. The Onions then get the benefit of the manure from the very start, which they require. Firmness being indispensable, light soils may be well trodden even now, more retentive ones being left till the surface can be broken down with forks in February.—C.

**Dwarf *versus* tall Brussels Sprouts.**—The value of a good strain of dwarf Sprouts is most marked when seen growing side by side with the tall kinds. I have a portion of both this year, and I have decided to give up growing the tall, big-sprouted kinds. Recently when looking these over I noticed that the tall-growing kinds had not a good sprout nearer than from 6 inches to 9 inches from the ground. On the other hand, the Dwarf Gem strain had good sprouts near the ground. Another recommendation of the dwarf strain is that it stands the frost better, as the leaves hang down and cover the stem. Again, the dwarf kinds do not want so much space. This last autumn I noticed Early Dwarf Gem had good sprouts a month earlier than the tall-growing; and now at the end of January I consider it will continue bearing as long as the tall-growing kinds.—J. CROOK.

**Celery and moisture.**—The note at page 40 draws attention to the good quality of Celery this season. In my experience it was never better. I do not mean so much for mere size, but for the crisp, nutty flavour of the heads and their solid growth. I am not inclined to go as far as "A. Y. A." and advise that very little feeding of any kind is required if a fair quantity of manure is given at planting time, as in dry seasons the plants when they attain a fair growth absorb the food more quickly, and rich food in the way of surface supplies is necessary, or there is a check,

with the result the plants bolt and those left are tough and flavourless. It may be thought, why should liquid manures be given more in dry seasons? because when given these the plants absorb the food more readily; whereas in a wet or dripping autumn the soil is not in condition and the plants are so full of growth that such aids are not required. My opinion is that a wet season is just what the plants like, provided there is good drainage and the plants are not moulded up too early, this latter being the reason of decay. I am not an advocate for giving a large body of manure at planting-time. This may be carried to excess, as the plants at the start cannot absorb such quantities and do not get the food at the proper time. If given liquid manure once in ten days growth will be solid and there will be no decay. In Celery culture the best results are obtained by varying the treatment according to the season. They certainly like a wet season if other requirements are attended to.—W. M.

**Standard-bearer Celery.**—Those who require a medium-sized Celery of first-class flavour would do well to give this variety a trial. It is one of the best keepers I have grown. For spring use I have found none so reliable. It is not large, but the flavour is all that can be desired. I have had this variety good well into May. I usually sow the seed early in April on a warm border, placing a frame over it till the seeds come through, and plant direct into the trenches. By this means I get late heads with little trouble. I lift early in March from the trenches and place in a cool place under a north wall or trees to check growth; by this means it may be had much later in the season.—S. H. B.

**Model Carrot.**—This is an excellent early variety and far superior to the old Shorthorn kinds. Last year I sowed this variety, and the older kind the first week in March on a warm border, and it was fit for use two weeks in advance of the older form. The roots of this variety are about 6 inches long, symmetrical in shape, thick at the shoulder, and stump-ended, the skin smooth and of a bright scarlet colour. For frame work it is excellent. I sowed this variety last August in the open for drawing in a fresh state during the winter months and the quality is all that can be desired.—W. S.

**Dwarf Erfurt Cauliflower.**—Of late years there have been many selections from this variety, and where it can be obtained true it is one of the best Cauliflowers ever sent out. It is a favourite variety on the Continent. I have grown the true type for some time, and it is well worth a trial by those who require early Cauliflowers of good quality. It is larger than Snowball, but when sown in heat it is nearly as early. I prefer to sow it in autumn and winter in frames or pots, as then the produce is finer than from plants raised in heat early in the year. This variety is of very dwarf growth, having a short leg or stem and broad, thick leaves, with a close, hard, white curd of splendid flavour. For later use the Erfurt Mammoth type is equally good.—W. M.

**Huge Onions.**—Are Onions 4 lbs. and 5 lbs. each in weight required? I think not. Of what use are such huge bulbs except for exhibition? The varieties Mr. Crews names are comparatively new, such as Ailsa Craig, Rousham Park, and the quite new to me New Mammoth Pompeii. I venture to think we can do without the last-named, as Onions 5 lbs. in weight will serve no useful purpose; these monstrosities should not be encouraged. I am not finding fault with these growers for improving the culture up to a certain size; for instance, one dozen weighing 12 lbs.; these are large enough for all purposes, as they may in time oust the Spanish Onions so largely imported into this country, and are, if not too coarse, useful as a winter vegetable. By growing to such dimensions as stated at p. 41 I fail to see their value, for I am sure such will never pay when the cost of production is taken into account. These huge bulbs will not pay the market grower. For shop windows or for exhibition exorbitant prices may be obtained for these huge Onions.

For sound, well-ripened large Onions there is a demand. Many of the older kinds, such as White Spanish, may be grown to a very large size with special cultivation. Some of the newer kinds may be termed good selections of the old. I am pleased to see this improvement in their culture, but we do not want coarseness. A few years ago the Tomato was taken in hand, and we had fruits 2 lbs. to 3 lbs. in weight, but they were useless, being flavourless and not at all freely produced.—GROWER.

## STOVE AND GREENHOUSE.

### FINE-FOLIAGED PLANTS FOR DECORATION.

THE demand for these seems to be ever on the increase, and gardeners are often put to serious straits to know how to provide a sufficient quantity for that purpose, particularly those who have only a limited amount of glass at their disposal to work up a stock. Where this has to be accomplished, it will be necessary to commence propagation as soon as possible. There are many plants with light graceful foliage that are well adapted for such work, and if these are taken in hand now, a good stock may be obtained by the time they are required for use. Plants of a hardy and half-hardy nature having light graceful foliage are numerous, while others of a dwarf compact habit render them most desirable adjuncts for edgings or covering pots, and those of a trailing habit are indispensable for mantel-pieces, slabs, &c. *Carex riparia variegata*, *Dactylis glomerata*, *D. elegantissima aurea*, *Phalaris arundinacea elegantissima*, and *Molinia coerules variegata* may now be divided and potted into various sized pots, according to the strength of the plants and the purpose to which they are intended to be put. *Eulalia japonica gracillima*, *E. variegata*, and *E. zebрина*, all very useful plants for furnishing rooms, should now be divided, and after being potted in a light rich mixture ought to be started in a gentle heat to induce them to throw up their slender Grass-like foliage, which when young is very pleasing. There are also several of the Bamboos very useful for this work, more especially those with small leaves and compact habit, such as *Arundinaria falcata*, *A. Fortunei*, and *A. Fortunei aurea*, all of which are readily propagated by division. Among the Grasses that are more tender will be found *Panicum variegatum*, easily grown in heat from cuttings. About half a dozen should be put into a 3-inch pot, filled with light sandy loam. When rooted the tops should be cut off in order to make the plants break close to the pots. *Carex europæa*, a light, graceful species, with narrow, variegated leaves, is easily propagated by dividing the roots; likewise *Carex variegata*, a dwarf kind. *Curculigo recurva* and *C. recurva variegata* are readily increased by dividing the roots. *Ophiopogon Jaburan variegatus*, *O. spicatus* and *O. europæus* are all useful plants. Of Ferns and Lycopodiums there is a goodly number. Those, however, with light graceful foliage and easy to cultivate are the most serviceable, such, for example, as some of the *Adiantums*, *Pterises*, *Lomarias* and *Davallias*. The *Selaginellas* most suitable are *denticulata*, *cæsia* and *Wildenovi*.

There are also numerous stove and greenhouse plants, with both plain and variegated foliage, that are most useful for indoor decoration, all of which can be grown without much trouble if due attention be paid to their requirements. Take the *Caladiums*, of which there is almost an endless variety of dwarf compact habit with medium-sized foliage. The old *argyrites* must on no account be despised, as there is no other with the same striking unique habit. *Le Nain Rouge* comes next, after which we may put *Marguerite Gellimer*, *Martha Lorforg*, *Comte de Germiny*, *Ibis Rose*, *La Lorraine*, *Isis*, *Ibis Rouge*, *Mme. Leon Say*, *Mme. J. Box* and *Mme. Alfred Magne*, all of which have very delicate telling

foliage. Of *Crotons* there is also a numerous assortment; those, however, with long, narrow foliage are the most useful for this purpose. Cuttings rooted in September ought now to be potted into 5-inch pots in order that the pots may be well filled with roots before they are used. Other cuttings should also be put in to supply plants of suitable size. *Aralias*, such as *Veitchi* and *A. gracillima*, should be grafted on *A. Chabrieri*, which can be easily increased by cuttings. *Dracenas* ought also to be propagated. To get well-furnished plants quickly, ringing is the best mode to adopt, but where small plants are required these are best produced from root cuttings. Those having narrow foliage are far preferable, as they are much more graceful. *Pandanus Veitchi* is so easily grown, that no place where there is a quantity of table plants required should be without a good stock of it. The smaller the young offsets are taken the better, as such make the best furnished plants. *Phrynium variegatum* is another plant useful for this purpose, and is easily propagated by dividing the thick fleshy underground rhizomes just as the plants commence to grow. *Pilea muscosa nana*, *Pellionia Daveauiana* and *P. pulchra* are also well adapted for mantel-pieces, hanging baskets, &c. *Asparagus plumosus* and its varieties are so easily grown, that no place is complete without a quantity in various-sized pots. They may be propagated either by seed or cuttings. The former mode is the surest, as with care good plants may be had in a short time. A quantity of *Myrsiphyllum asparagoides* should also be grown, as it is so useful for supplying greenery of a light delicate nature. It is quickly raised from seed or by dividing the roots. Some of the variegated Vines, such as *Vitis heterophylla striata* and *heterophylla variegata*, also *Ampelopsis Veitchi*, will be found serviceable in their turn. Palms form such a considerable element in this branch of horticulture, that no place can do without them. There are, however, some far more useful than others, and it is to these I wish to draw attention. In my opinion *Rhapis flabelliformis* must take a front place, not that this is one of the most graceful, but it is one of the easiest to cultivate, for it may be increased freely by the suckers sent up from the roots. Then there is its counterpart, *R. flabelliformis variegata*, a most desirable species. *Cocos Weddelliana*, *C. plumosa*, *C. flexuosa*, and *Romanzoffiana* are all good. *Kenias* of all kinds are very serviceable, as they will put up with almost any amount of rough treatment, but they should never be taken into the dwelling-house unless well rooted. *Areca Verschaffelti* is also a handsome Palm, but on account of its slow growth it will never become popular. *Geonoma gracilis* and *G. intermedia*, *Euterpe edulis*, *Thrinax elegans*, and some of the *Chamædoreas* are also useful, but, as a rule, those with large fronds are not serviceable. As most of these are obtained from seed, it is best to procure them in a small state and grow them on to the size required. I must not omit to name one or two of the most useful plants of all for room decoration, namely, *Aspidistra lurida* and its variegated form, for no plant withstands the heat of a room better than these. They may be had in all sizes by dividing plants when small. Then there are the *Araucarias*, of which there are several species, all of which are raised from seed, or may be obtained in small plants for growing on, *Aralia Sieboldi*, so quickly grown from seed and some of the *Maples*, which make truly ornamental plants for grouping during the summer months. Few plants are more pleasing for room decoration than well-grown specimens in pots of *Acer Negundo variegatum*, as its foliage intermingles well with that of other plants of a bolder nature. From the above, ample material in the way of foliage may be found for the largest establishment. H. C. P.

**Slugs and Lapagerias.**—In many places, especially where conservatories are damp and shaded, the young succulent growths of *Lapagerias* fall a prey to slugs and snails. Their attacks

may be checked by the use of shallow troughs made of tin or zinc and fixed round the collar of the plants so as to meet and form a circle. These should then be filled with water, which slugs and snails will not face. Of course, the pests will occasionally find their way up the wall, and, descending the main stems of the plants, reach the young growths at the base, but as a rule where the tins are used very little damage is done.—J. C.

\* \* The best thing to ward off the attacks of slugs in the case of the *Lapageria* is to put a wide-mouthed lamp glass over the shoot as soon as the point can be seen coming through the ground.—Ed.

**Stenotaphrum glabrum.**—Among the plants suitable for forming living edges in the conservatory, of which a good selection is given on page 67, I should be inclined to add *Stenotaphrum glabrum* (the Australian Buffalo Grass), which with only a shallow soil to root in quickly forms a good edging to a stage, or in any similar position, and the shoots droop down for a considerable distance, thus doing away with any stiffness or formality. There is a variety in which the leaves are more or less striped with creamy white, but when growing freely it is often liable to revert to the type. Though generally known under the specific name of *glabrum*, according to the "Dictionary of Gardening" the correct name is *americanum*. It may be sometimes met with in Covent Garden Market, where, under the collective name of Grasses, a varied assortment of plants are occasionally brought together.—H. P.

### HOYA CARNOSA.

I HAVE two plants of *Hoya carnosa*, each 6 feet high, in 7-inch pots, in which they have been for three years. I want to pot them into 9-inch pots. Please tell me the best soil for them to flower in and the best time to repot them. They look very healthy now, but have never flowered yet.—G. FAWLER.

\* \* The best soil for this plant is peat with a small proportion only of yellow loam (about one-sixth). The peat should be full of fibre, so also should the loam, the finer or dusty particles in both instances being cast aside, for this plant does not thrive for any length of time in a close or retentive soil. To the peat and loam should be added some charcoal broken up to about the size of nuts, or in lieu thereof some clean broken potsherds would be a good substitute, the object in either case being to aid in keeping the soil porous. Silver sand also should be freely added. In potting take particular care to pot firmly, as by so doing the soil will remain much longer in a condition favourable to healthy root-action. For a time after potting some considerable care should be taken in the watering so as not to sour the new soil. At no time is *Hoya carnosa* a moisture-loving plant as compared with the average run of plants. Before it is watered it should be seen that the soil is fairly on the dry side. The extreme of drought should of course be avoided. The leaves should not at any time become soft or flaccid. Rather more water will be required when new growth is being made. The plants in question have not lost any time in respect to flowering; they may not possibly do so this year, even under the best of treatment. A sunny, warm position from the spring onwards will do much to encourage flowering. As young growth proceeds do not tie the shoots to the older wood, but allow them either to trail about or train them upwards on small strings. In potting be careful to use clean or new pots, also drain the pots liberally. Having two plants, I would advise, if it be practicable, that one be planted out, using the same soil as in potting, only in a considerably rougher state. Under this treatment the plant would, if favourably circumstanced, grow more freely, and in all probability flower sooner if not eventually so profusely. A large border would not be needed, but this and many other plants enjoy an extended root-run. *Hoya carnosa* is a very good plant for training on a wall; grown thus, if the wall be a

little damp, it will, Ivy-like, root into the wall. It has a tendency even to throw out these roots under pot culture. When the flower-trusses eventually appear, do not cut them, for the same trusses will go on flowering continuously for several years at least once and often twice the same season; thus it will be seen that cutting the trusses robs the plant of much of its beauty.—PLANTSMAN.

#### SOFT-WOODED WINTER-FLOWERING PLANTS.

THESE are now grown very largely, few places of any size being without one or more small span-roofed houses specially adapted to their culture. These being kept at a minimum of 50°, are very gay for some three or four months through the dullest time of the year. It is impossible to dwell on all the good things available for the purpose, but there are two or three worth noting at this particular time, as the season for their propagation for another winter is now fast approaching. Zonal Pelargoniums are among the best winter plants. They should be struck singly in small pots and shifted on twice, using at the final potting a stiff holding compost that will be conducive to firm, short-jointed growth, and potting firmly as for Strawberries. I have tried many varieties, but can find nothing better than such old favourites as Raspail, Guillion Mangilli, Constance and Queen of the Belgians. In fact, I look upon these in their respective colours as the best winter-flowering varieties in cultivation. If any correspondents have found anything better, perhaps they will kindly name the varieties. Raspail Improved hardly comes up to its name with me—a larger truss, but the growth is coarse and straggling. The summer quarters of these Pelargoniums and other plants intended for winter work are pits from which Potatoes have been cleared. They stand here on a bed of ashes close up to the glass, get plenty of air day and night, and are lightly shaded during very hot weather. Of the two Libonias, *L. penrhosiensis* is much the better; indeed, it is of its size about the best winter-flowering plant grown. It has been a dense mass of flower for the last two months. I find plants in 4-inch pots come in very handy for house decoration. They are used in connection with Ferns for grouping round large Palms, Dracaenas, &c. This Libonia is struck with the Pelargoniums and potted finally in a similar compost. A few of the old winter Begonias, as *fuchsoides*, *Carrieri* and *Knowsleyana*, can also be struck at the same time and a few plants of *Eupatorium riparium*. The branching flower-heads of the latter look well associated with scarlet and pink Pelargoniums. A batch of *Primula obconica*, if propagated by division, may find a place with the above-named plants, and with them through the winter months batches of *Freesias*, *Cyclamens* and *Bouvardias*. E. BURRELL.

**Iris reticulata for pots.**—This is a splendid bulb for pots. Last September I potted up some fifty bulbs into 4½-inch and 6-inch pots, placing them in the open. In December they were removed into a greenhouse, and now at the end of January they are in full bloom. If these bulbs are taken care of when out of bloom they will flower again next year.—J. C. F.

**Monochæstum sericeum multiflorum.**—In a warm greenhouse this is just now in flower, and a pretty little plant it is. It forms a freely branched bushy specimen, clothed with oblong-shaped leaves, while the flowers, which are each about a couple of inches in diameter, are of a very pleasing shade of purplish mauve. This *Monochæstum* is very free-flowering, and at this season of the year its bright-coloured blossoms are especially welcome. Much the same might be said of *M. Lemoinianum*, except that the flowers are of a deep rose tint. These *Monochætums* need a soil principally composed of sandy peat, and too much atmospheric moisture during the winter is very injurious to them. The *Monochætums* are nearly related to the *Pleromas* and *Lasiandras*, which

include among their number some most beautiful flowering plants for the greenhouse. *Lasiandra macrantha*, with its rich purple blossoms, is well known, while *Pleroma elegans*, at one time popular, is now rarely seen. It is difficult to maintain in a thriving state, but so beautiful as to be well worth a little extra care and attention. It forms a rather upright, but freely branching shrub, said to reach a height of 5 feet, though it will bloom when much smaller than this. The flowers, which are 2 inches across and of a rich bluish purple, are borne freely at the points of the shoots during the summer months. All the above are natives of the Andean region of South America.—T.

**Tuberous Begonias.**—Although these showy flowers grow with much freedom when they have got good hold of the soil, it not unfrequently happens that a percentage of the tubers fail to start when potted. When looking through Mrs. Harrison's garden at Weybridge in the early spring of last year I noticed that the whole stock of *Begonia* tubers was laid out on cocoa fibre fully exposed to the light. They were just pushing out new growths, and it appeared that they were starting very regularly and strongly. Mr. Glyde, the gardener there, told me that he makes it a rule to treat the tubers in this way. When they are potted at once they are liable, no matter how carefully the watering may have been done, to become too wet before new roots are formed, in which case the tubers will often rot away. If laid out in the manner above mentioned they can be frequently looked over and any signs of decay will be easily perceived and can be promptly dealt with.—J. C. B.

**The dropping of buds of Camellias.** My observation of this occurrence, as well as my past experience in cultivating the plant, have led me to believe that the main cause of *Camellias* dropping their buds is dryness at the roots, though I am aware that excessive moisture, especially if the soil be a sour one, and therefore unsuitable, is also a cause of buds dropping. It is in the months of January and February that so many failures of this kind are experienced. Not long since I was looking over the collection of a successful cultivator who has a number of finely grown plants coming into bloom, and he stated that in his opinion the prime cause of failure with amateurs is that they cannot or do not give the plants the attention as to air and watering they require at this season of the year, especially as to watering, as they become drier at the roots than they suppose, and when they water give just as much as the pot will hold, which is often not enough under the circumstances. The advice this grower gave is that the supply of water should be enough to keep the soil in the pots nicely damp, and no more, and to provide as far as possible an equable temperature.—R. D.

#### CROTONS IN SMALL POTS.

THE value of well-grown plants in 5-inch or 6-inch pots of the long, narrow-leaved and brilliantly coloured *Crotons* is well known. I have a whole house devoted to *Crotons* for house decoration, and grow them in two batches; the two-year-old plants after providing the cuttings for the season's batch are thrown away. The present is a good season for propagating. In taking off the cuttings use only well-formed shoots, as if small pieces are used with the foliage mostly gone it is impossible to secure well-furnished small plants. Sponge each cutting carefully in case there be any insects. Each cutting should be placed singly in a 2½-inch pot, plunging afterwards in cocoa-nut fibre refuse in the frame, where if kept close and fairly moist, also shaded from strong sun, roots will quickly form. Large well-developed tops are best notched and covered over with Moss so as to form roots before being detached. In these cases directly the Moss is fairly permeated with roots, the tops must be cut off and potted, afterwards plunging them in the frame to become established. After the cuttings are rooted stand them out in

the body of the house previous to repotting them.

The best results are obtained by repotting direct into 5½-inch pots, this being a useful size for decoration. The best soil is equal parts of loam, peat, and leaf soil, the loam being rough. Add also crushed charcoal, coarse sand, and a little artificial manure. Pot the plants firmly, standing each well apart from the other. Direct light being so essential for the plants' perfect development, it is an excellent plan, other room not being available, to suspend each plant under the glass roof, as in this position the most perfect colouring is developed. This may be carried out in quite large houses without interfering with the other occupants. Keep the roots regularly supplied with moisture, also syringe freely twice a day, using in each case tepid soft or rain water. Dryness at the roots will soon cause an attack of thrips or red spider. I do not care to water with liquid manure at any time, but if a stimulant is needed use some proven artificial manure. Well prepared soot water may also be used with advantage. A. YOUNG.

#### CHRYSANTHEMUMS.

##### GOOD JANUARY CHRYSANTHEMUMS.

VARIETIES in any section that flower freely during the first month of the year are especially valuable. It is an easy matter now-a-days with the abundance of Japanese varieties that there are to have plenty of bloom early in December as well as through the two previous months, but for January flowering the case is different, and any that are especially adapted for this purpose deserve to be universally known. With this object I have made a note of all that have come under my notice, especially during the current season. Fortunately, now-a-days we are not tied hard and fast to one or two colours—white and pale pink—as was the case a few years since. Much more of a choice is now available, as varieties with rich colouring as well as those of a deep yellow tone are not wanting. No doubt pure white-flowered sorts are the more useful. Undoubtedly the pride of place in this section of colour belongs to

*L. CANNING*, introduced by Craig in 1888. Early blooms exhibit a trace of ivory in the colour, but those from late buds are of the purest white. When first introduced I thought it would take a high position as an exhibition variety, but, unfortunately, it has a peculiar knack of going "blind" at a critical time—bud formation. This defect hampers its chance of ever becoming a show bloom. As we have abundance of white-flowered sorts for the exhibition table, the loss of this is not felt, but it is an assured gain as a useful variety for late use. Plants carrying from thirty to fifty well-developed, medium-sized blooms are valuable early in January for decoration apart from their value in supplying material for cutting. Being naturally dwarf in habit, it is better fitted for conservatory use.

*M. E. A. CARRIERE* is one of Délaux's 1889 introductions. As an exhibition flower it is sometimes seen in splendid condition, but cannot be depended upon. As a late-flowering variety it is really grand, especially when allowed to grow away uninterruptedly from the cutting stage, not interfering with its growth in the matter of topping of the shoots more than once, that being done when the plants are 5 inches high. By growing this sort afterwards upon the let-alone principle, removing what is known as the crown bud and running the growth on to produce terminal buds, abundance of flower is obtained with stems from 1 foot to 2 feet in length. After these main blooms are cut lots of smaller ones develop from the side shoots, and for wreath-making these are especially useful. When the earliest formed blooms begin to open they exhibit a distinct trace of creamy white, tinted with blush, but this

gradually passes away with age, leaving the fully expanded blossoms pure white. All smaller flowers afterwards are white from the commencement.

**LEON FRACHE** is very similar in its colour when the early blooms begin to expand, but with age they also change to pure white. In growth it is vigorous and quite erect, giving serviceable material for the filling of tall vases. The bark has a peculiar red tinge, contrasting strongly with its deep green leaves.

**PRINCESS MAY**, introduced by Agate in 1892, is another pure white-flowered variety that deserves attention. The growth is robust, the blooms large, with long thread-like petals, which seem to open exceedingly well at the end of December and early in January.

**MILLE THERESE REY** is not only one of the finest of the white-flowered ordinary November-blooming kinds we have, but it gives a quantity of late produce from side growths, which spring freely from the main stems after removing the points where the large blooms have been growing.

**PELICAN** is a much older variety, being one of a batch sent out by Bouchard in 1885. At all times the blooms are pure white, the incurving florets slit at the tips.

**EUGENE DAILLEDOUZE** arrived in the spring of last year from America, and is an acquisition to the late-flowering section. The medium sized florets incurve neatly while expanding, exhibiting traces of dull crimson on the reverse side. When fully expanded the petals recurve, showing a rich yellow surface.

**CHARLES BLICK** is an English raised seedling of medium size, which makes it all the more useful for decoration. The florets droop gracefully, the inner ones incurving towards the centre, the colour a shade of soft yellow.

**E. G. HILL** is an American raised Japanese incurved variety, more valuable as a late-flowering variety than aught else. The colour, golden yellow, is suffused on the reverse with carmine. By topping the plants twice in their early stages of growth, the plants run up fully 6 feet high if the cuttings are inserted early, as they should be.

**ROBERT OWEN** is perhaps the finest type of the incurved Japanese section we have, and as such it is valuable, but when the virtue of late flowering is combined it enhances the regard for any sort. The colour is yellow, suffused with bronze, quite pleasing and distinct.

**SOUVENIR DE MME. BULLIER** promises to become quite the best of richly coloured late varieties. The surface colour is best described as a rich port wine, with just a tinge of plum colour suffusion; the reverse is dull red. The narrow flat florets are blunt at the tip. Growers should make a note of this for late flowering.

**VIOLET ROSE**, an incurved Japanese, distinctly rose in colour, is useful where variety is required. Full, solid blooms are produced quite late.

**EDA PRASS**, although regarded as a really good November-flowering kind of the incurved Japanese type, is also useful for giving flowers in January. The colour, light salmon-pink, fades to bluish. All of the above belong to the Japanese section.

**GUERNSEY SUNSET**, a single-flowered variety, is extremely useful, giving a quantity of useful flowers in the early part of January. The florets are yellow with a bronzy suffusion.

**HENRY PERKINS** was first sent out as a Chinese or incurved variety, but it has since been relegated to the incurved section of Japanese, to which it rightly belongs. As a late-flowering sort it is useful to those who care for these dull-coloured types. In colour it is bronze, shaded with rosy chocolate. Neatly incurved blooms can be had quite as late as the third week in January.

E. MOLYNEUX.

**Chrysanthemum W. H. Lincoln.**—This Chrysanthemum is without doubt—as “J. C. B.” (p. 76) and Mr. J. C. Tallack (p. 58) say—exceedingly valuable for late bloom, though I should not have thought that it was necessary to disbud

the variety to the extent advocated by the latter writer, if at all. I have in my mind a plant that was produced from an old stool which was put in the open ground in February, 1894. This was left absolutely untouched from the time it was planted out till it was taken up and potted in an 11½-inch pot in October, when it was brought into a late Peachhouse. Nine stems rose from the soil, which stems divided into eighteen, and then again into forty-eight, producing that number of flowers, which averaged 3½ inches in diameter. The blooms were cut on December 24 and remained fresh till after January 1. A few days before the flowers were cut a nurseryman offered 4s. for the plant as it stood. If a few hundred such plants could be potted and housed in the autumn and succeeded equally well, this Chrysanthemum should prove a veritable gold mine to the market grower. Of course the instance I refer to was but a solitary one, and I am aware that too much reliance should not be placed on what might prove merely one of those exceptions that prove a rule. Still the fact remains that in one case this variety has done its own stopping and disbudding very satisfactorily. The centre bloom on each shoot seemed to monopolise the sap to such an extent, that the others either refused to swell at all, or developed into small, mis-shapen blooms, showing but a dozen or so yellow petals. The total height of the plant did not exceed 2 feet 3 inches from the pots.—S. W. F.

**Chrysanthemums Boule de Neige and Ethel.**—In the notes on Chrysanthemums at page 58, Mr. J. C. Tallack, in speaking of Boule de Neige, says, “the flowers are pure white, and remind me very forcibly of those of Ethel, which it greatly resembles.” &c. Does not this sound somewhat strange, seeing that Boule de Neige belongs to the hybrid pompon class, while Ethel most certainly belongs to the Japanese section. Moreover, the former has short, blunt, and rounded petals, while the latter has much longer petals distinctly and acutely pointed, and in these respects the kinds named are perhaps two of the most distinct. In habit, generally, they are equally dissimilar, the one dwarf and bushy, the other tall and erect. Apart from both kinds having white flowers, I only know one point—and that a bad one—in which both are alike, namely, that of showing a black centre much too frequently. But there is really very little need to grow either of these kinds in the future, while we have others vastly superior in their flowers and equally late in flowering. I refer specially to Lady Lawrence and L. Canning. Like Mr. Tallack, I had a doubt about the freedom of the latter when it began to expand, but now I have little fear that with stronger cuttings another season it will be all right. The season of 1894 was not remarkable for sun heat, and I am of opinion that the very late kinds of Chrysanthemums especially suffered in consequence.—E. J.

**Chrysanthemum catalogue.**—In the last-issued supplement to the centenary edition of the catalogue of the National Chrysanthemum Society there are some errors, which, when the catalogue is entirely revised, as hoped for in the preface to the supplement in question, will need correction. In the first place I note the date of the incurved variety Lucy Kendall is given as 1893, and John Shrimpton and William Seward as 1892. Now, as a matter of fact, the three varieties were first exhibited in the autumn of 1892, and were all distributed in the spring of 1893, so that whether the date be taken from the time of their receiving a certificate, or when they are first sent out, there is a mistake somewhere. Beauty of Castlewood (Spaulding), 1892, is also an error, as it was catalogued by Mr. Cannell in 1890, and received a first-class certificate from the National Chrysanthemum Society in the autumn of that year. Mr. Cannell is credited with the Japanese incurved William Tricker, but that is of American origin, and so described in his catalogue. Of the large Anemones, Cincinnati (Cannell), 1886, was one of many others sent to this country from America in 1885. This was, I think, the first large consignment of new Chrysanthemums from

across the Atlantic. Besides the variety Cincinnati, we received from America nearly sixty varieties, some of which were popular for a time, but have since given way to newer forms. Among the most notable of the 1885 varieties were—of Japanese—Bicolor, Fimbriatum, Gloriosum, Hon. John Welsh, Mrs. William Mencke, Snowstorm, Syringa, Gorgeous, Moonlight, Mrs. C. W. Wheeler, and Samuel Henshaw. Mrs. James R. Pitcher, valuable as an early flowering variety, also came at the same time. There were also several single-flowered forms, one of which—Mrs. A. le Mout—has been within the last year or two more than once noted in THE GARDEN. The Anemone varieties consisted of four, there being, besides Cincinnati, Agnes Hamilton, Merrimac, and Wyoming.—T.

**Chrysanthemum Sœur Melanie.**—This pompon variety was introduced by Lebois as far back as 1869, and no better kind really exists when we consider the freedom with which its blossoms are produced and their purity. I know of no Chrysanthemum that makes a better pot plant than this, and its buds open simultaneously. For cutting it is a decided gain to have all of its flowers fully developed at the same moment. There is not the waste then as with some sorts that just open the centre flower of the bunch, the remainder staying so long dormant as to spoil many unopened blossoms if cut with a long stalk. It is a good kind to grow as an edging to groups of Chrysanthemums in pots in public gardens, where oftentimes the leafless stems of the front row plants are an eyesore. The plant retains its foliage until the flowers are cut or faded. As an out-of-door variety it is quite one of the best, flowering not only profusely, but quite early, thus escaping to a great extent the early winter frosts which do so much toward making this aspect of Chrysanthemum culture a failure. Plants smothered with flowers can be had either 2 feet or 4 feet high. The finest batch of the latter class I ever saw was last November in the Pilgrim Nurseries of Messrs. R. B. Laird, Edinburgh. Fully two hundred plants were blooming in great profusion, the flowers being found useful for cutting.—E. M.

#### CHRYSANTHEMUMS WITH A SINGLE STEM.

I HAVE some 300 Japanese and incurved Chrysanthemums, the cuttings having been struck last December. I wish to grow them on with one single stem until the natural break, say in May, June, or even July, and thus carry on three shoots only. The only fear I have is that they will not show a bud in May, June, or July, and thus will continue to have only the single stem. If this is so, the said stems will grow too high and I shall only have one flower on each plant. I have for some years cut them all down early in May and allowed three stems to grow, and they have averaged in height from 3 feet to 5 feet. The Japanese blooms have been grand, but the incurved have always been wide and loose. I desire them all to flower in November. I have good convenience to house them all.—E. JOHNSON.

\*\* You need have no fear that your plants raised from cuttings inserted as early as the middle of December will not show the first bud early enough to provide three shoots to each. Many of the varieties will make their first natural break in April, others later. We often hear complaints about plants not making the natural breaks in their growth sufficiently early to admit of their forming flower-buds at the right moment. In searching for the cause it is generally found that the cuttings were not taken until the middle of February. Late propagation does not admit of sufficient time for the various stages of growth being made at the right period. It is not possible to obtain first-class blooms from plants that are not thoroughly matured. Nothing but a long season of steady uninterrupted growth will mature the plants. Especially is the want of maturity of the wood felt in the incurved section, where solidity of petal and fulness in the



centre are more important than in the case of Japanese blooms. Plants of the latter section give really good results when treated on the cutting-down principle for decoration, but seldom can the blooms be compared to those produced by plants growing in a more natural manner. When the decoration of the conservatory or dwelling house is what the plants are most needed for, then the lack of quality in all its essential points is not so noticeable as in the case of exhibition blooms.—E. MOLYNEUX.

#### GENEVAN PLANT PROTECTION SOCIETY.

I MUST ask to be allowed to send a few more words to you on behalf of my old friend, M. Correvon. I have just now received a long letter from him, and he puts the whole matter in the clearest possible light. He simply says about *Eritrichium nanum*, "I defy Mr. Leonard to prove his assertion." The word of an honest man and that about some practice of his own ought certainly to be enough. But there are two or three very important points in the long communication I have received which possibly may be quite new to Mr. Leonard, and which may lead him to think twice before he accuses another person so roundly.

1. According to M. Correvon, he has oversight of two separate gardens which are managed in different ways, whose objects and surroundings are quite different, and where no comparison of one with the other should be made. The first may be said to exist on public and scientific grounds. The second is a private adventure, and where a regular business is carried on I can see no reason in the world why the same man should not be at the helm in both cases. Nor do I suppose that anyone else would object to it, and this applies also to the society for protecting alpine plants. But the bearing of all this on the controversy in question is very great indeed. M. Correvon says: "We have founded in the Alps of Valais, the garden of the Linnæa, for which the Swiss Government gives me allocation. That garden does not trade at all. It is a conservatory of the alpine Swiss flora, and we took it, as it is situated 1700 mètres in the Alps, and it is allowed to us because the plants succeed all very good there—living plants, &c." What he means is clearly this: It is not murder to take up a large plant of *Eritrichium nanum* and transfer it from one alpine height to another, because under conditions of this sort the plant will not be wasted, but will prosper abundantly; secondly, it is not done for any purpose of private gain; and thirdly, it is a matter which is recognised and allowed by the Government under which he lives. The mountains are not denuded in the least. M. Correvon only tries to focus in one spot a few of the treasures with which they are clothed, and he acts quite openly about the matter, having obtained the *imprimatur* of the authorities under whom he is living.

But (2) with regard to articles of commerce he denies explicitly that any rare and prohibited plants are ever torn by him from the mountains at all. In the first place, he believes that such a proceeding would have no chance of succeeding—the plants would be sure to die—and in the second he is under engagement to take a very different course; and he challenges anyone to adduce the smallest semblance of proof that he has not been true to his colours.

3. It should be noted that a list of protected plants is always given by the society which M. Correvon represents, and that nothing else is regarded. His words are these: "We would not take the engagement of not rooting up common plants." To attack him for touching common plants is very much the same thing as though fault were to be found here with the removal of a Primrose or Daisy, while the few remaining haunts in this country of *Gentiana verna* or *Cypripedium Calceolus* are jealously guarded.

4. He seems very much to regret that quite recently in last year the Swiss Alpine Club took

the decision, as he calls it, of sending an appeal to each Swiss cantonal government to ask them to make laws defendant *expressément* the uprooting of any plants at all, and he regrets that it passed. The minority, of which he was a leading member, considered that a law of such a drastic and sweeping sort as that would defeat its own purpose in the end, and that some rare and very interesting plants would suffer from the measure which was meant to preserve them. But so long as things stand as they are, a perfectly new condition has been introduced into all this affair.

It is difficult to believe that Mr. T. Smith, of Newry, was serious in what he said to you on Saturday last. By this morning's post a letter came to me from one of the highest authorities of the day in matters of this sort. One sentence in it ran thus: "Speaking generally, I agree with you that seedlings properly managed (*i.e.*, from thinly-sown seed and pricked off at the best time) give better results than disrooted plants from their native habitats," and M. Correvon very pertinently says in his letter to me, "If Mr. Smith can find in the Alps any young plant of *Azalea procumbens* to be able to be planted in a pot, I will be astonished." Mr. Smith seems to me to be conscious of the weakness of his case when he says about imported plants, "Of course, they require some care to be established," and I regard him as throwing it all away when I read such a sentence as that. Not only do many imported plants require "some care," but they very often cannot be established at all, when seedlings answer quite well.—H. EWBANK, *St. John's Vicarage, Ryth, Isle of Wight.*

\* \* \* Our readers are tired of this discussion; so are we. M. Correvon sends us a few pages in French as an answer to Mr. Leonard, but does not in them mention THE GARDEN as the journal in which the discussion appeared, and also omits to state that himself and his friends had the same opportunities of giving their views as Mr. Leonard had. We can publish no more notes on this matter.—W. R.

#### NOTES OF THE WEEK.

**Cattleya Trianae.**—The varieties of *Cattleya Trianae* are already making a fine show in collections, as *C. Percivaliana* is going out. Large importations of the former species are now being sent over and sold. Some truly fine specimens are now to be obtained from the dealers in these plants, and the probability of good varieties being amongst them makes their flowering very interesting to amateurs.—J. D.

**Skimmia oblata Foremani.**—How seldom do we see this shrub made use of for winter decoration. In sandy soil, where it grows and berries freely, it is a simple matter to pot up the plants as required in the autumn. This variety appears to be a slight advance upon the type, the berries being somewhat larger and the colour, if anything, richer. At the late Edinburgh Chrysanthemum show a group of thickly berried plants of this *Skimmia* was very attractive.—E. M.

**Colour in Ivies.**—I planted the north side of the house here with Ivies (the sun never catches it, through hills east and west shutting all chance out). The leaves of the Irish Ivy assume that beautiful bronze we never get in a south aspect, and a golden-leaved variety improves in colour year after year. Honeysuckles intermixed flower most profusely, and *Ampelopsis Hoggi* growing amongst these shows a marvellous bit of colour in autumn.—GEORGE BOLAS, *Hopton Hall, Derby.*

**Pear Glou Morceau.**—With me on a strong soil this Pear (figured in last issue) is not a success, although grown as a cordon against a wall. In my case the roots are kept as near the surface as possible. The trees make good growth, but the fruit does not ripen sufficiently well to encourage me to plant it freely. Bush trees growing in the open were a complete failure, and were cut down to make room for something more profitable. This

is a grand Pear on warmer soils, but on heavy soil it is not so.—E. M.

**Puschkinia scilloides.**—It would seem as if the most essential thing for this little gem of spring bulbs is a place where there are no slugs. They are certainly extremely fond of it. I know one who gave up trying to grow it because deformed and mutilated flowers were all that ever appeared. A short time back before the snow came I went to examine a border of spring bulbs to see if any were peeping through, and found that the points of this bulb were above the surface, and scarcely one had escaped injury from slugs.—A. H.

**Dendrobium luteolum.**—The pale yellow flowers of this species are not usually very attractive, but a large well-flowered plant in Messrs. Veitch's nursery showed its value for decoration. These distinct yellow-tinted forms are useful for hybridising. No one could have supposed that such beautiful garden varieties as *D. Ainsworthii*, *D. Leechianum*, *D. splendidissimum*, *D. Schneidrianum*, &c., could have been produced from such a poor grower and rather mediocre-looking species as *D. aureum* (*syn.*, *heterocarpum*).—J. D.

**Christmas Roses.**—I am disposed to think that many failures with these arise from starting with large plants at first, particularly if they have been, as I have frequently seen them, washed clear of all soil. It is difficult to get the mould back into all the interstices when planting, and decay sets in as a matter of course. With small plants it is otherwise. The roots can be spread out so that all are in contact with the soil, and the plants soon become established. Given small plants and a well-drained loam, I think fewer failures would occur.—T. J. WEAVER, *Crouch End.*

**Manettia bicolor.**—I was much interested in the note on *Manettia bicolor* in a recent issue of THE GARDEN. Its peculiar tubular flowers, of a waxy consistency and of a beautiful scarlet shade with yellow tips, on stalks some 3 inches in length, render it invaluable for button-holes. It can be grown either trained balloon fashion in pots of any size, from 4½ inches upwards, or on wires under glass. Ordinary greenhouse treatment will suffice. Some plants I lately saw have been in bloom since the end of May until the present time, and look as if they would continue flowering for some time yet.—P. G. BARTRUM, *Tooting.*

**Tree Pæonies in pots.**—A plant of that lovely Tree Pæony *Reine Elizabeth*, growing in a pot and already bearing several fine flowers, suggests one certain way of fully enjoying the great beauty of this and other kinds. As yet none of them are common or very popular in gardens, which is surprising considering the size and gorgeous beauty of their flowers. They are slow-growing things, but, all the same, bloom well enough in a young state, and under glass retain their fine form and purity of colour unmarred by any inclemency of weather, such as too often prevails at the time of their flowering in the open air.—A. H.

**Saccolabium Harrisonianum.**—This beautiful white, deliciously-fragrant form of *S. violaceum* is now in flower. I bought plants of it many years ago for *S. giganteum*, from which it does not differ much. They are both sweetly scented. *S. giganteum* is much larger in all its parts, and the flowers of *giganteum* are purplish spotted on a white ground. *S. violaceum* is quite common in the Philippine Islands, while *S. giganteum* is a Burmese species. The plant is found in great profusion and luxuriance on trees in a deciduous jungle, exposed to the rays of a tropical sun, and in most cases with its leaves scorched. We do not want to see the leaves scorched in our collections; therefore the plants are carefully shaded. The plants succeed admirably in the warmest house if given clear drainage with an inch in depth of freshly-gathered Sphagnum Moss mixed with the drainage.—J. D.

**Chinese Primulas.**—Messrs. Stuart and Co., Covent Garden, send us a collection of their *Primula* blooms from plants that have been grown at Nice.

The blooms came to us as fresh as if newly picked, the colours being well preserved in every case. The flowers, by no means coarse, represent fully the many varieties now in cultivation. Among the sorts sent were Chiswick Red, the colour very rich; rubro-violacea, remarkable for the violet shade; alba magnifica, a fine flower of good substance; Fern leaved white, and many others. One in particular named Stuart's New Crimson struck us as being remarkably fine. The flowers, of medium size, were striking, the colour intense crimson, certainly the brightest we have yet seen. Evidently the finest culture had been bestowed on the plants, showing that a bright and sunny clime is needed to bring out to the full the many beautiful hues that are to be found in the Chinese Primula of to-day.

**Pilumna fragrans.**—The flower to hand from A. Brooker arrived in a very bad condition, but I should presume it to be of this plant. It is sometimes known as *Trichopilia fragrans*. This plant has been known for a considerable number of years, and has been imported by various firms in large quantities from New Grenada, and as it will thrive well in a cool temperature, it is very suitable for amateurs. It should be potted in fibrous peat and Sphagnum Moss with a few nodules of charcoal, and as it will require plenty of water during the growing season, the drainage must be good. Raise the plants well up above the rim of the pot, and whilst at rest the supply of moisture must be greatly reduced. The flowers of *Pilumna fragrans* are very sweetly scented, and borne about three or four together upon radical peduncles. The sepals and petals are about equal and slightly wavy, white, mostly tinged with green; the large lip white, stained with orange-yellow at the base.—G.

**Lælia anceps Sanderiana.**—This is one of the most beautiful of the white-petalled forms of *L. anceps*. I saw it very beautifully in flower in Messrs. Veitch's nursery the other day, and it was equally fine in our own collection. It differs but little from the celebrated variety *Dawsoni*, except that it has less colour on the lip, and the petals and sepals of *Sanderiana* are longer in proportion to their width. The great value of *L. anceps* and its varieties consists in their easy culture, and in the fact that they are always to be depended upon and keep up their constitutional vigour for any length of time. The accounts we have received from some of the collectors of the climatal conditions of their native country conclusively prove how very hardy they must be. I once marvelled to see a man turn the hose on to a houseful of Mexican *Lælia*s in Messrs. Baekhouse's nursery at York on the afternoon of a sunshiny day with no shade for the plants. It was marvellous to see how well they looked, but the treatment was very similar to the natural conditions which obtain in their native country.—J. DOUGLAS.

**Daffodils in pots.**—Every lover of Daffodils likes to have them for as long a season as possible, and since they are so amenable to pot culture and lose none of their charming grace and beauty when grown in this way, it is surprising one does not see them in pots more often. Hard forcing they do not like, but they can be brought on gradually to flower some weeks in advance of those outside, and most welcome they are. I have just called upon a neighbour whose greenhouse is quite gay with them, making a pretty display at small cost of labour and fuel, for he has done little more than keep the frost out. Among the kinds in bloom I noted pallidus præcox, Countess of Annesley, Sir Watkin, Duchesse de Brabant, ornatus, and Leeds, white and yellow types. Many more kinds will be open in a few days. There is not much trouble and little outlay involved in the pot culture of these bulbs. A few kinds, notably Sir Watkin, continue to flower freely, although kept in pots two or three years in succession, but there are exceptions, and the general rule for safe guidance should be to give the bulbs one year in the open ground and one year in pots. With a piece of reserve ground for the purpose this is a simple and easy matter.

They amply repay the trouble, and are doubly welcome in a season like this, for the snow lies deep and the spring flowers will be later in consequence.—A. H.

**Eranthemum pulchellum.**—There is no flower that provides such a striking shade of blue in the stove at this season of the year as the above. Blue is a scarce colour in winter, and the full rich tone—almost gentian-blue—of the blooms always attracts attention. The plant, which is a native of the East Indies, is easily propagated. Cuttings of the young growth taken in the spring root very quickly in sandy soil if kept close, and by the winter, with a little judicious stopping, make good plants bearing many panicles of bloom. Autumn-struck cuttings in small pots, if well treated, produce handsome flower-spikes and look well associated with the giant strain of white Cyclamen, which can be flowered well in heat during February. *Eranthemums* are sometimes grown in frames during the summer, and where constant attention cannot be given to keeping the atmosphere charged with moisture this is doubtless a good plan. Hot-house treatment when rationally carried out is, however, the most conducive to success. Plenty of water, both in syringing and in damping floors and stages, should be used, or red spider will make its appearance. Care should be taken to ventilate but sparingly, as this *Eranthemum* is impatient of draughts and does best in a somewhat close atmosphere. Liquid manure may be used with good results, especially as regards the older batch of plants. Unfortunately, the flowers drop as soon as cut, and are therefore useless for decoration.—S. W. F.

**Oncidium tigrinum and O. splendidum.**—I saw the other day the two *Orechids* above named beautifully in flower in Messrs. Veitch's nursery at Chelsea. The one species cannot very well be mistaken for the other. There is a very good coloured plate of *O. tigrinum* in the *Magazine of Botany*, vol. xiv., 97, under the name of *O. Barkeri*. It was so named by Dr. Lindley in 1841. The true *Oncidium splendidum* is figured in the *Botanical Magazine*, tab. 5878, as *O. tigrinum splendidum*. They seem to be as species quite distinct from each other. I find them not so easy to keep in a good healthy condition, but there is no doubt that if we could hit the right treatment they require at different seasons of the year we would be quite successful with them. They certainly do best with a Cattleya house temperature, but most of the Mexican *Orechids* seem to require a drier, rather more airy position than the South American *Orechids* requiring the same temperature. They also want a more decided season of rest, while they can do with a good supply of water until the bulbs are well developed. I have grown *O. Barkeri* of Lindley for many years, and can look with pleasure on the long branching spikes for some four or five years after they have been imported, but it is rather annoying to find them decrease in size after a time and become quite small in comparison to what they used to be. *Orechid* fanciers who value this beautiful *Oncidium* for its sweetness and beauty, and all the more at this dull season of the year, must purchase a few plants periodically.—J. DOUGLAS.

**The weather in West Herts.**—The present frost has now (Wednesday) lasted sixteen days, during which period the exposed thermometer has on no night registered less than 12° of frost, and on nine of these nights it showed over 22° of frost. The coldest day as yet was the 6th, when the temperature in shade never exceeded 25°. During the preceding night the thermometer in the screen, and 4 feet above the ground, showed 22° of frost, while that on the surface of the snow fell 1° below zero, thus indicating 33° of frost. Both of these readings are the lowest recorded here since January 8, 1886, when they were in each case 3° colder. In the screen the temperature on Tuesday night remained at nearly its lowest point from 3 a.m. to 8 p.m., or for five hours. Owing to the covering of snow the soil temperatures

have not fallen so low as they otherwise would have done. Up to the present time the frost has, however, penetrated the ground to the depth of a foot. For more than a week the direction of the wind has been some point between north and east. On the 5th the sun shone brightly for very nearly seven hours.—E. M., *Berkhamsted*.

**The late Mr. William Thomson, of Clovenfords.**—During the last thirty years it was my privilege on many occasions to come into contact with the above-named gentleman, whose loss the horticultural world is now deploring. In many respects our departed friend occupied the "pride of place" as a gardener, and on this ground I think that some effort should be made to perpetuate his memory. Another (and perhaps a more important) reason why I think this suggestion should be carried out is in consequence of those higher qualities which our departed friend possessed in an eminent degree. No one could be in the company of William Thomson very long without coming to the conclusion that he was a man of integrity and uprightness. There was a tone, an atmosphere, if I may use the figure, about him which one inhaled, and so became the better and stronger. On several occasions I was struck with his conduct to those under him. He beheld them as fellow-creatures, and knew that they had as much right to happiness as himself. Disdainful looks, proud, snappish, severe speeches, which some can make use of upon every supposed offence, were seldom seen or heard from him. From the best of principles, therefore, his servants were bound to serve him—the principle of love. I sincerely trust that someone more capable than myself will take this matter up; if so I will do all in my power to assist.—BRUCE FINDLAY, *Manchester*.

I WENT to stay at a very grand and beautiful place in the country where the grounds are said to be laid out with consummate taste. For the first three or four days I was enchanted. It seemed so much better than Nature, that I began to wish the earth had been laid out according to the latest principles of improvement. In three days' time I was tired to death; a thistle, a heap of dead bushes, anything that wore the appearance of accident and want of intention was quite a relief. I used to escape from the made grounds and walk upon the adjacent goose common, where the cart ruts, gravel pits, bumps, coarse ungentlemanlike Grass, and all the varieties produced by neglect were a thousand times more gratifying.—SYDNEY SMITH.

**Royal Horticultural Society.**—The next meeting of the R.H.S. will take place in the Drill Hall, James Street, Westminster, on February 12. The various committees will assemble at noon as usual, and at 3 o'clock the annual general meeting of the society will be held in the offices, 117, Victoria Street.

**Keeping off rabbits.**—Would you kindly inform me what mixture is the best to paint young trees with in a plantation to keep rabbits from biting them?—A. P. C.

\* \* The best way is to wire the plantation and endeavour to keep down the rabbits. It is extremely difficult and unwise to paint every tree in a large plantation.—ED.

**Thomson.**—On February 3, Aliek, the only son of W. P. Thomson, of THE GARDEN, died in his sixth year.

**Names of plants.**—*J. B.*—*Myrsiphyllum asparagoides*.—*Fern.*—*Nephrolepis exaltata*.—*W. Eastwood.*—*Odontoglossum crispum*, a fine form, and we should like to see it again when the plant has become established.—*R. E. Bayne.*—Ordinary form of *Dendrobium Wardianum*.

**The Wild Garden:** or, the Naturalisation and Natural Grouping of Hardy Exotic Plants, with a chapter on the Garden of British Wild Flowers. Fourth edition, with wood engravings from drawings by Alfred Parsons, revised and enlarged. Lemay & Co., London. Price 12s.; well bound in half morocco, 18s. Through all booksellers.

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"This is an Art  
Which does mend Nature: change it rather; but  
THE ART ITSELF IS NATURE."—Shakespeare.

## FLOWER GARDEN.

### GLADIOLI IN SCOTLAND.

I HAVE always thought that the somewhat arid climate on the east side of Scotland is inimical to the Gladiolus. In Ireland it grows splendidly and succeeds year after year; and in the same way in Ayrshire, where in a few places it is made a speciality of, it does extra well and the varieties increase according to their kind. I have still varieties that were originally purchased twenty years ago, but the seasons including and following 1877 cleared out most kinds. The plants, as a matter of fact, had an insufficient space of time—considering the nature of the weather of these years—in which to make and ripen corms. Ever since then I have started the corms into growth before planting, and in this way have secured for them a better growing season. Last year has proved one of the worst, as numbers had not finished growing when frost in October cut them down. It is doubtful whether the Gladiolus degenerates. No doubt some kinds, from an inherent weakness of constitution, invariably fail to make stock, and they slip, as it were, through one's fingers. Mabel is one of them, so is Fleur de Lys, as well as Mme. Desportes and Michael Angelo. But there are many beautiful sorts that go on increasing year after year, so that it becomes a matter very much of selection in order to keep up a garden stock. Writing of the degeneration of the individual bulb, "Delta" makes an unaccountable slip. He refers to it as if decrease in size followed year after year in the same bulb until it ultimately disappears; whereas a new bulb, or, more correctly, a new corm, annually replaces the old one, and carries forward the individuality of the plant to another year. That in the case of certain varieties this kind of degeneration does occur there is no reason to doubt, but outside of these are numbers to which no such term is applicable. The comparative size of the corms, it may be said, depends largely on treatment, but influenced by weather in some degree. If there is abundant root-growth in conjunction with strong, healthy foliage, the corms are certain to be large. However, I have not found that large corms are any better, if so good, as those of medium size. They vary, in fact, from year to year, and if a medium or even a smallish corm is well ripened, quite as good a spike will result, though no doubt the number of spikes will be fewer in the aggregate where the collection embraces a large number of plants. As Gladioli are grown here mainly for cutting, and as it happens not infrequently that the plants are cut close to the ground in order that very long spikes with foliage may be had, it follows that first-class corms cannot be expected. I have already noted how well they do on the west coast, but even here, when the plants receive every attention, they succeed well. I some years ago purchased for an amateur a selection of good kinds, to which he annually added a few novelties. In a few years after commencing their culture he was obliged to dispose of surplus stock, and did so for years until he left this district. They were particularly well done, too, being started

under glass, and after planting out protected from cold and every care taken to preserve the foliage. One of the workmen on the estate here who started with a very few also grows them well. Last year he took at least four prizes, and I know he purchases none, so that the spikes he exhibits are *bona fide* home-grown. Good spikes of Gladioli are so valuable when cut for furnishing vases, that it is worth while to study their requirements in order to discover what treatment suits them in the particular district in which one may live. In this way I tried an old practice of starting the roots previous to setting them in the soil, and found it distinctly advantageous. The labour is not much, for the corms are set as closely as they can be placed together in ordinary cutting boxes with a shallow layer of leaf-soil under them. From this in May they are planted into the ground and much closer in the lines than generally advised; 4 inches apart is the widest I allow. The beds are raised. In dry weather they must have water, and manure of some soluble sort is imperatively necessary. As a rule, the plants ripen well, and it is very much better to lift them after growth has finished and let them lie on the open border to ripen than it is to dry them off in vineries or other cool houses. I have tried both methods, and the former is undoubtedly the best, as it is indeed the one I pursue with many other plants. I may add that I cut as early in the year as growers in the south of England.

In order to succeed year after year, one requires to be pretty careful in selecting sorts. Happily, there is a good number of really fine kinds that do well, and now so cheap that they can be bought by the dozen or hundred without running up a big bill. I name some below which are French, as I have but slight knowledge of English sorts. All are distinct, though placed in sections according to colour. White or nearly: Amalthée, Amitié Beatrix, Diamant, Enchantresse, and Shakespeare. Blue, opal, rose of many shades: Bicolor, Dalila, Fra Diavolo, M. A. Brougniart, Panama, Pasteur, Phoenix, Sceptre de Flore, Sultane, and Tere-sita. Red: Flamboyant, Grand Rouge, Dr. Bailly, Le Vésuve, Meyerbeer. Lilac shades: Baroness B. Coutts, Crépuscule, l'Unique Violet. Orange-red: Celimene; and reddish purple: Horace Vernet. A few sorts, such as Passe Rose among the new and Mabel among the old kinds are very beautiful, but they are expensive.

R. P. BROTHERSTON.

Tynningham.

**Crucianella stylosa coccinea.**—For quickly covering large patches on the rockery this is one of the most useful among hardy plants. Of dwarf trailing habit, growing only some 6 inches high, and spreading out into neat, compact tufts, it is especially helpful in furnishing large rockeries or for clothing sloping banks where few plants thrive. In spring when in flower the tufts are simply studded with the globular heads of crimson flowers, which continue in profusion several weeks. It is also well suited for the rockery border, where it should be allowed to ramble among the stones; or planted as an informal edging it may be used with good results in many ways, particularly where Grass does not do well. For example, in many small gardens small slopes occur on which we see Aubrietias and Arabis. In such places the above plant may be used with good effect, especially so if alternately planted with the white Arabis. The Crucianella is easily increased by cuttings of the young shoots in spring, almost every bit rooting in a few days.

—E. J.

**Christmas Roses.**—While *Helleborus niger* and *maximus* flourish in this garden where the

soil is inclined to be heavy, retentive, and consequently cold during the winter and spring, three miles from here—Shedfield Lodge—where the soil is sandy, Mr. Chequer cannot get them to succeed at all. He has tried them in the open ground and also in very large tubs of prepared compost, with similar results. I am a great advocate of the "let-alone" principle in Christmas Rose culture when once the plants have become established in any favourable position. My plants have occupied their present position in a border facing east for the last twelve years, and I have never once since missed a full crop of flowers, commencing at Christmas and continuing until the end of February. The roots are so arranged that an ordinary two-light garden frame can be placed over them at the end of October. From that time until the following spring the plants do not receive any water artificially, but while they are making their growth they receive copious supplies of water and occasional doses of weak liquid manure. I notice where any part of a plant does not grow so freely as others, a much thinner crop of flowers is obtained from that part. Directly the flowering period is past all seed-pods are removed, the surface soil is pricked up gently, and a dressing of freshly-chopped loam is added an inch or so thick, to be followed by a good mulching of half-decayed horse manure, which is allowed to decay and mix with the soil, washing the juices of the manure down to the roots.—E. M., Swanmore Park, Bishop's Waltham.

### EXHIBITION OF LILIES.

I RECENTLY noted in a contemporary that the Royal Botanic Society of Manchester have resolved to hold a great exhibition of Lilies in the gardens at Old Trafford, to open on the first Monday in August next. Now, beautiful as the different members of the genus are, they certainly do not lend themselves to a special exhibition, one great reason being the fact that their flowering season is spread over a lengthened period, beginning in the early part of the year with forced specimens of *Lilium Harrisii* and *L. candidum*, and out of doors about the end of May with *L. pyrenaicum*, while the Neighberry Lily (*L. neighberrense*) is the last of all the Lilies to bloom. Where a considerable number of this is grown some will often flower in September, while others will not bloom till nearly Christmas. In the early part of August the choice will certainly be very limited, for most members of the genus are over by that time. The whole of the erect cup-shaped Lilies, of which the best known are *L. bulbiferum*, *L. umbellatum* or *davuricum*, *L. elegans* (represented in our gardens by numerous varieties, differing from each other more widely than any other Lily), and the old Orange Lily (*L. croceum*), are all past, unless it be a flower or two of *L. elegans venustum* or *armenicum*; and of the large Martagon group, *L. superbum* is the latest. This is an August-flowering Lily, and a few flowers may be sometimes had of that most graceful species, *L. Leichtlini*, the ground colour of which is pale yellow, dotted with brownish red. This brings us to Mr. Baker's Archelirion, or open-flowered Lilies, to which most of those that bloom in August belong. *L. auratum* is one of this group, and although this Lily cannot be forced or retarded as some of them can, yet many may be had in bloom by the early part of August. The typical *auratum* is by no means the only form, for we have the well-marked varieties *platyphyllum*, *rubro-vittatum*, and *virginale*. Of these *platyphyllum* is altogether more vigorous than the typical kind; the leaves are also broader, and the flowers, which are very thick and massive, are more saucer-shaped. As a rule, the blooms of this do not show the same variation in the marking as those of the type. A spotless white flower is *virginale*, or *Wittei*, as it is often called. The only tinting is a yellowish band down the centre of each petal. This is in constitution the most delicate of all the *auratums*. The marking of *rubro-vittatum* is very different from that of the last, each petal having a broad stripe of

crimson down the centre. This is also known by the varietal name of *eruentum*. If these Lilies are grown in pots for flowering early in August, care must be taken that they are not pushed on too much during their earlier stages, otherwise they may be over before the time required. The bulbs of the variety *platyphyllum* are large, and composed of fewer, but larger scales than those of the ordinary *L. auratum*, while bulbs of the other two are, as a rule, a good deal smaller. Another Lily of the same section which flowers in the open ground generally towards the end of August may be brought on under glass to bloom earlier than this. It is the well-known *L. speciosum*, of which numerous forms are now in cultivation. This Lily is one of the most satisfactory of all for flowering in pots, as it is not so liable to die off as *L. auratum*, and can be depended upon to flower well. In an exhibition of Lilies during the month of August the different varieties of *L. speciosum* would no doubt be largely represented. *Lilium tigrinum* would flower about the required time, and of it there are some distinct varieties. If needed for blooming in pots the choice is, however, limited, as the ordinary Tiger Lily and its double-flowered form do not succeed at all well under such treatment, but the variety *splendens* or *Leopoldi* is very satisfactory when so treated. This retains its foliage well, which is not the case with the others, and the red flowers spotted with black are very distinct from the lighter tints of *L. auratum* and *L. speciosum*. Of newer Lilies we have *L. Henryi*, which may be had in flower about that time, but it is really far more satisfactory when planted out as at Kew than when grown in pots; still, under these latter conditions its colour makes it very noticeable. *L. nepalense*, one of the most distinct of all Lilies, might perhaps bloom in the early part of August, but its gracefully recurving blossoms are, as a rule, later than this in expanding. This Lily requires careful treatment, and it is very seldom that one gets more than a single bloom on a stem. Occasionally the secondary blooms of *L. Harrisii* will be at their best about the beginning of August, but they are very irregular in this respect, and not to be depended upon for decorations. From the above it will be seen that at a Lily exhibition at that season of the year but a very small proportion of the species in cultivation will be represented, and indeed at no time could a very large number be got together. H. P.

### THE WINDFLOWER.

(ANEMONE CORONARIA.)

At one time the Anemone was largely grown for cutting for market, but that practice has ceased to a considerable extent. It is undoubtedly one of the brightest and most effective of spring flowers; and as well-established roots make a free growth and produce many blossoms, it is matter for regret that the Anemone is not more cultivated, especially as very fine strains are met with in some parts of the country. Dry roots are largely imported from Holland, France, &c.; they come over early in September. If they are planted in a rather deep rich loam, not too heavy, they make growth in late autumn and put forth flower in spring. The old florists preferred a friable loam of a gritty character. The soil was deeply dug and manured, and planting done from October until January. A bed was made and five roots placed in a row across it, 6 to 7 inches apart. They were planted 2 inches deep, the soil gently pressed upon them, and a covering of partly decayed leaves and manure placed on the surface to the depth of 2 inches. Some growers left this to decay and become incorporated with the surface soil; others would clear the mulch away and replace it with one composed of well-rotted manure. Water was freely given in dry weather. A bed planted in October would flower in May; those planted in January not until July. Well-established roots will frequently bloom in autumn, and this arises largely from the fact that it is a characteristic of the Anemone to again put forth

growth as soon as the roots are well matured. To prevent this in the case of choice varieties which were intended for exhibition in May it was a practice with the old growers to attempt a kind of root-pruning, namely, to cut partly through the roots in the soil, dividing them near the base of the root, and so preventing a second growth. But those who grow the Anemone for garden decoration, and who do not make a practice of lifting the roots as soon as the foliage has turned yellow for the purpose of ripening them off, are not at all displeased that it blooms again in autumn, though it may affect its spring flowering.

Dry roots planted in October should by this time have some leaves above the soil, and a little protection from severe weather is desirable. This can be done by top-dressing with rough leaf mould, with which is mixed some fibry loam, some well-decomposed manure, or half-decayed leaves. Such a loose and light dressing affords protection to the crowns of the tubers and to the young foliage springing therefrom, and the dressing as it decays becomes of value as a fertiliser.

Opinions will differ as to whether the double or the single varieties are the more attractive. For my part I prefer the single flowers, for their simple beauty. I think many of the double varieties have the appearance of being irregular and uncouth, despite their size and fulness; and for the same reason I prefer a single Tulip to a double one, or a single Daffodil to one that is double. But the variety of the Anemone affords ample for all to admire it and deem it worthy a place in their gardens. R. D.

### THE SHOW AURICULA.

THE figure of Mrs. Moore (Douglas) show Auricula at p. 77 is a reminder that soon the fancier will be busily engaged amongst his favourites. The flowering plants have all been arranged together by themselves where they can be well cared for, beginning with the green edged, the most difficult class in which to obtain high-class flowers. There is a decided tendency amongst seedlings raised from the choicest varieties of this class to come with the margin slightly dusted with farina or meal, as it is termed. A high-class variety is only produced after long and patient waiting. Some may say the rarity of a plant makes it more valuable to fanciers, and doubtless this is so in Auriculas as well as the more aristocratic Orchid. I have been trying for many years to obtain a good green-edged Auricula, and have obtained one in *Abbe Liszt*. This is the only one that has been good enough to send out, and yet people think they are hardly dealt by if they do not get some sterling novelties out of a 2s. 6d. packet of seed. Out of 1000 plants I have saved half-a-dozen, and after growing them again have reduced them to one. Of course, this excessive weeding out may seem a too fastidious way of dealing with the Auriculas, but there is no other way in which they can be brought up to the present high standard of excellence. The florists of long ago valued the show Auricula even more than we do, for Hogg, who wrote in the early years of the present century, tells of a plant of Auricula green-edged Colonel Taylor which was sold for five guineas. A new and rare green-edged Auricula in these days would not be valued at more than one guinea.

I like to see the Auricula plants well frozen early in the year. Our plants of both show and alpine are still well frozen in the garden frames, and herein I think the old growers had the advantage, for their plants were free from the troublesome Auricula aphid. I fancy this pest is kept under when the plants are well exposed during the winter; whereas it lives and thrives in a house from which frost is excluded by the use of a heating apparatus. Many persons fancy that this parasite is very injurious, and turn their plants out of the pots periodically to remove it from the roots. This frequent disturbance of the roots is very injurious to the Auriculas and checks their growth very much. The insect does not

seem to do any harm if it is kept away from the neck of the plants, and this can easily be done with a small brush and fine tobacco powder. Pay particular attention to the seedlings of the show varieties to get them pricked out, because unless they have a good start early in the year they will not be strong enough to give good flower-trusses next year. The alpine Auricula makes much better growth in a season, and really does better planted out in the open garden; in fact, the show Auricula may also be planted out, and will be much less trouble. The young plants should be set out in some shady position away from any drip. The Rev. F. D. Horner plants his seedlings out in a well-prepared, open border. I noticed that even in his North Yorkshire garden he had made an arrangement for shading the plants with light tiffany during the summer months. Surface-dressing Auriculas was quite recently a universal custom amongst fanciers, and they did it because such was the usual custom. This custom some of us have found out had better be discontinued. A considerable quantity of soil was generally taken out from amongst the surface roots, this being replaced with a mixture of very rich material, but observant cultivators found out that even up to the time when the plants were in full bloom the roots did not penetrate into this strong mixture. I tried a mixture not so strong, and one into which the roots would grow freely if they were potted in it, but the plants evidently do not form roots at least near the surface at the time of flowering, for they made very little use of this mixture even when only moderately rich. J. DOUGLAS.

**Colour and form in show Auriculas.**—"D. C." writes asking if a crooked flower like Mrs. Moore should be admitted in a selection of choice Auriculas. I beg to say that Mrs. Moore is not a crooked flower, as can be seen by examining any well-grown truss of it. When it was first exhibited it received several first-class certificates of merit from various floral societies, the judges being the best florists at the time. I also gave the colours as approved of by the "Auricula Fancier." For my part I would be delighted to see Auriculas raised with a ground or body colour of violet, deep blue, plum, or scarlet. I esteem many of the old florists, and greatly admire them for the good work they have done in preserving for us these beautiful favourites, when the fashion of the age was for ribbon borders, panel gardening and carpet bedding, but in the colour and form of their flowers they were too much wedded to routine, and they remind us rather of what poor Oliver Goldsmith wrote of his celebrated countryman Edmund Burke. Our old-fashioned florist saved from his seedlings only the flowers which he knew would be admired by his brother florists. Any other garden varieties outside the range of the standard of excellence aimed at by the florist were not tolerated in his garden, although I am informed some of the rejected Auriculas were sold to cottagers at a penny per plant in the good old times.—J. DOUGLAS.

**Violets.**—The border likely to be required for the preparation of plants for another season may receive attention so soon as the weather will permit, breaking it down with the fork, and, if the natural soil is rather on the stiff or light side, adding a bit of heavier stuff or some leaf-soil as circumstances demand. It should be so workable at planting-time as to allow for a light treading, which has the effect of settling the soil down and admitting a more rapid formation of root. I used to dibble the runners straight from the plants on this border, but finding they were a long time making headway if the weather came hot and dry, I have resorted to the plan of putting them for a time rather thickly in a frame, shading a little until root action commenced. The very best plan if time will allow is to tie a piece of damp Moss round each runner, placing them for a time in the frame; they can then be lifted out with all the tiny roots intact, and will start away at once. A south-west border is the best site.—E. BURRELL.

SUNFLOWERS AT TRESSERNE.

IN the autumn of 1892 I replanted about 2 acres of vineyard, and the winter of 1893 being unusually severe, it was found when spring came that a large number of the little had perished. As they could not be replaced until the autumn I determined to fill the vacant spaces for the time being with tall-growing annuals. Early in May I had some of Vilmorin's best strain of giant Sunflower and Castor-oil plants sown in boxes, and towards the end of May several thousands of little seedlings were planted out. Shortly afterwards I left for England. When I returned to Tresserne in August I found a perfect forest of Sunflowers and Ricinus. It was a wonderful and beautiful sight. When we walked among them they towered above our heads and shut out the sky. Visitors to the garden were much impressed by the unusually beautiful effect. Last spring myriads of seedlings appeared, and I felt much distressed in having to destroy them, but in the interest of the new vineyard all could not be suffered to grow, so only a few hundreds were allowed to remain. These were the plants which attained to such gigantic proportions last autumn. There appeared to be about equal numbers of the branching and single plants, and they both showed the same tropical growth. Many of the single-flowered plants were quite 20 feet high, and the individual blooms were about 22 inches in diameter. The foliage was equally fine, and, indeed, in every respect the plants showed a luxuriance truly remarkable. When in November they were cut down and the stems piled together they made quite a large stack. I have no way of accounting for such unusual growth beyond the favourable position of the garden, which slopes towards the Lac de Bourget in a south-westerly direction. The soil, naturally excellent, had been well trenched and manured for the plantation of Vines. The seed, which originally came from Vilmorin, was self-sown last year. More rain fell last spring than was the case the previous year, and that would probably be an additional aid to the plants, which last season averaged from 2 feet to 3 feet more in height than these of the preceding year.

E. WILLMOTT.

BOG PLANTS.

I OFTEN wish, when I read Mr. Wood's instructive letters in THE GARDEN, that for his sake as well as our own his interesting place ran down to the river at the bottom of the Kirkstall valley instead of being confined to the drier land on the side of it, though I am not sure whether the bog plants he finds it so difficult to grow would thrive as luxuriantly near the pellucid (!) waters of his Yorkshire stream as they do in this Norfolk village. If the chimneys of the great ironworks at Kirkstall still smoke as they did when I last saw them, I wonder, not that he sometimes meets with plants that object to grow in his garden, but that he is so generally successful.

Fortunately, my grounds extend to the banks of a small stream, the river Yare, and the low,

marshy ground near it is a perfect paradise for bog plants. *Onoclea sensibilis*, for example, which he alludes to in your issue of January 26, p. 61, and which he thinks is injured by wet, becomes in my bog garden as truly a weed as it

most at home by the side of a ditch, where it creeps along quite down to the water's edge, the fronds being sometimes nearly 3 feet high. Speaking generally, I find many of the North American Ferns quite able to hold their own in perfectly wild places. I often wonder they are not more frequently introduced into the choicer parts of the plantations that often surround our English gardens. To anyone who, like myself, prefers to grow plants that require no attention and give no anxiety, I can confidently recommend for such a purpose the under-mentioned species, viz., *Onoclea sensibilis*, *Struthiopteris pennsylvanica*, *Osmunda cinnamomea*, *O. interrupta*, *O. spectabilis*, *Nephrodium Goldianum*, *N. intermedium*, *Poly-podium hexagonopterum*, *Asplenium angustifolium*, and *Aspidium acrostichoides*, and with a little more care and in suitable soil (the others will grow anywhere), *Adiantum pedatum*, *Aspidium munitum*, *Athyrium Michauxi*, *Cystopteris bulbifera*, *Nephrodium marginale*, and *Woodsia obtusa*. There are many other hardy exotic Ferns that will take care of themselves, or nearly so, and an admixture of these foreign species with English Ferns in the wild garden would make it a much more interesting place than it sometimes is. Mr. Wood speaks of *Tropeolum speciosum* as disliking wet, but it grows in my bog garden at a spot that is sometimes nearly under water in winter, and has been so during the last few weeks several times and for days together.

On the same page as Mr. Wood's letter, another of your correspondents ("A. D.") says that with him *Primula Sieboldi* proves impatient of moisture. He will be surprised to know that the only situation I care to grow this beautiful plant in is the wet, waterlogged soil I have described, because I find it does so much better there than anywhere else. Two years ago I dug up a great patch of it, and sent it to the spring show at Norwich without any preparation at all, where it gained a first prize in a small collection of pot plants. *Primula japonica*, too, will not grow anywhere with me as I like it to do except in wet ground, where it flourishes and seeds about like a perfect weed. I quite agree with your correspondents that some plants must be kept dry in winter, as they are at home, for example, on the Alps under the snow, or in Canada, where the ground is hardened many feet deep by 60° of frost. In such localities it is either winter or summer, and plants are either resting or growing. In this country the winter and spring, with their unceasing changes of the temperature of the air and the condition of the soil, are simply bewildering to plants with delicate constitutions that come from countries where they live in a climate they can depend upon, and some of them cannot adapt themselves to the different state of things. Some plants cannot be cultivated at all except at the expenditure of an amount of trouble out of all proportion to their value. Fortunately, there are many others that seem absolutely indifferent to the vagaries and inclemency of our English climate if only they can have plenty of moisture in the growing season. One thing, however, many



A giant Sunflower at Tresserne. Engraved for THE GARDEN from a photograph sent by Miss Willmott, Warley Place, Essex.

is in the Canadian swamps. I give it no care or attention whatever, but let it run about just as it likes, and it thrives and holds its own in my woods with the rank-growing marsh plants as well as any English Fern could do. It seems

even of these object to, and that is smoke and impure air. I think some of Mr. Wood's difficulties must be due to the Kirkstall forges on one side of his garden and the Leeds factory chimneys on the other. I should like some day to have the opportunity of showing him how thoroughly at home such things as those already named, *Cypripedium spectabile* (which I remember he mentioned in your columns some time since) and many other plants which are often thought difficult to grow can be, even though growing in soil which is saturated with moisture all the year round, and sometimes even submerged in winter.

Cringleford.

F. W. HARMER.

#### NOTES ON HARDY PLANTS.

**Sarracenia purpurea.**—With regard to the hardiness of this species, of which I believe there are several varieties, I find it in my Yorkshire climate fairly so, but it would certainly not be safe during its first winter unless well established. To succeed with this plant it is important to begin with good roots, planting them in the early summer so that they may become well established before winter. Under these circumstances I find it hardy. I have proved that strong crowns with a good piece of woody rhizome and a few fresh leaves are not only the likeliest specimens to grow, but if set in 9 inches or 12 inches of rotten Sphagnum and peat, with plenty of silver sand to make this fibrous stuff somewhat solid, plenty of roots are rapidly formed in the first summer. Of course, when I say plenty of roots I mean in the relative sense, because the *Sarracenia*s do not possess at best a dense set of roots. I think it also advisable to cover over *Sarracenia*s in the open with a thickish covering of dry Bracken during winter. This enables the plant to keep in a more verdant state as regards its old leaves, and such when exposed in spring are better for a vigorous start compared with plants whose leaves are all browned.

**Saxifraga Burseriana.**—One recalls this charming alpine from seeing its prominent buds in the first month of the year, waiting only for a spell of a week's fine weather to become expanded. By the kindness of Mr. Boyd I am now possessed of some five or six varieties of this species, but I have recently found that other than the plants that he has raised are existent with very marked features of distinction, and, like many other species that one could recall, some of the beautiful varieties must have existed for a long time. From out-of-the-way gardens I have received plants with features almost as wide from what I took to be my typical plants as if they had been other species entirely. At the time I supposed it might merely be a difference caused by soil or climate, but after growing them for a year under the same conditions as my own, I see the distinctions maintained. I merely mention this, as it might be interesting to know this plant may be had as variable from seed almost as the well-known *Saxifraga longifolia*. It is not a case of having to throw out bad forms, because I have never yet seen an indifferent one. All the varieties I have seen are well worthy of culture.

**Meconopsis Wallichii.**—May I mention, anent the note of the Rev. Mr. Page-Roberts (p. 31), that I can conceive it quite possible for his experience with this plant to be different from mine. Different garden conditions would account for it, for one thing. The two facts I would wish to state, however, are, first, that I never tried this plant in what I understand by the term "total shade," and I am under the impression that I gave with the sunny position one also of extra moisture for the roots. With many plants to be grown in one condition without the other would make all the difference in the world. I have always grown this plant and also *M. nepalensis* at the bottom of sunny pieces of rockwork, where the slopes acted as a sort of watershed for an

extra supply of wet, and, it may be added, wet of the most healthful kind, seeing that in such parts—among stones and in sunshine—there could be neither stagnation nor sourness.

**Phyteuma comosum.**—There are two plants of this name, and, what is more, both are in commerce, so that it is somewhat essential that the kind intended should be thoroughly understood. The plants are widely distinct, and once seen, a novice could scarcely mistake the one for the other: and, indeed, the descriptions of the respective authorities will be sufficient for those who have the means of referring to them. The most distinct form is *comosum* (Linn.). *P. comosum* (Vill.) is a much coarser plant with a totally different habit, and growing 1 foot to 1½ feet high, and it is synonymous with *Alph. de Candolle's comosum*, which that authority classes as a variety of orbiculare. The much-sought-for *comosum* (Linn.) grows but several inches high, has rigid foliage, somewhat contorted and toothed like Holly, borne on very short stalks. For the size of plant the flowers are both large and numerous, but I think the culture requires to be somewhat special. The half-woody root-stalks are better for being kept-dry about the collar, but the more extreme parts of the roots should reach good soil. The plant has also a decided preference for limestone. I grew my most successful plants with the points of the stronger roots in rich moist loam, with quite 3 inches on the surface of gravelly soil and lime-chips. J. Wood.

Woodville, Kirkstall.

#### FLOWER GARDEN NOTES.

**WHITE FLOWERS.**—Hardy white flowers useful as border plants and in most cases for cutting range from tree-like shrubs down to the dwarf white Harebells. In the shrubs one of the best is probably the Fringe tree (*Chionanthus virginicus*), handsome in foliage and beautiful as any Orchid when in full flower. It is not so widely known as it should be. The fact, however, that it was shown as a forced plant in very fine form once or twice last season will doubtless have the effect of increasing the number of its admirers and planters. It must be noted that it is quite as good out-of-doors as in the show tent. It would be advisable, if possible, to have another name for this plant, unless it is simply known as the Fringe tree. The scientific name gets sadly mixed up with the better-known *Chimonanthus fragrans*. A very fine shrub, growing to a height of 10 feet, is *Spiraea arizifolia*; a clump of this in a prominent position makes a brave show when covered with the huge spikes of white flowers. This, by the way, is not such an essentially moist border plant as are the dwarfier *Spiræas*. I have seen it very fine on poor dry ground. The grandiflorus form of the Mock Orange is a great improvement on the type, being nearly or quite twice the size and of better substance. Two dwarfier shrubs that will be found very useful are the white Broom and that beautiful double *Spiræa*, *S. prunifolia* fl.-pl.; the one is a capital plant for covering dry, sloping banks, the other equally good for clothing portions of wall or old tree stumps. Turning to the larger herbaceous plants that furnish us with white flowers, all the *Spiræa* family make capital border plants, but the best for cutting are *palmata* alba and *astilboides*. The latter is the least satisfactory in growth of any of its class; it wants a moist, partially shaded border and the ground to be well prepared. We find the long spikes of *Galtonia candicans* very useful for cutting. Those starting the culture of this plant are advised to plant in occasional open spaces that may occur in beds of American plants or young shrubberies rather than to mass it alone in the open. The long flowering stems of the taller *Campanulas* are very acceptable for large vases, and so are the spikes of the white Foxglove. Of the white varieties of *Antirrhinum*, *Phlox*, *Pyrethrum* and *Sweet William* it may be said that they are as useful for the flower basket as for the border. Last season was a disastrous one for *Sweet Williams*; the foliage was badly

attacked with disease early in the year, the remedial measures employed had not the effect of checking its progress, and the size of flower-spike was considerably lessened; indeed, in many cases the display was very poor. Smaller herbaceous plants bearing white flowers that are always acceptable would commence with a good strain of white *Polyanthus* and run on with white *Pinks* and *Carnations*, the various forms of the *Poet's Daffodil*, the double white *Yarrow*, *Veronica spicata* alba, &c., whilst an occasional picking from a good white *Viola* comes in handy for small glass bowls and vases. There is now a radical change in the type of flower employed for cutting, as one sees extra-sized blooms of white *Pæonies* used.

**SPECIALITIES.**—There are some herbaceous plants, hardy and easily grown, that have come rapidly to the front within the last few years, very beautiful in quantity on the border, and for cutting almost equal to the choicest hot-house flowers. It is not that these are anything new; on the contrary, they might almost rank with old-fashioned flowers; but rather with the growing taste for such things, planters—having recognised their beauty and adaptability for vase work—gradually took measures to see that they should be well represented in the flower garden. Take, for instance, the *Montbretias*. Some, at any rate, of the family were introduced as far back as 1825, but it is only very lately that it is the rule, and not the exception, to find them even in large gardens, and yet it is safe to assert that there is no more acceptable flower for the vase, whether it be the spike in its entirety for tall, or the side shoots for shorter glasses. Growth was early this year with the *Montbretias*, and the young blades are cut down nearly level with the ground by the late frosts. The flowering season will in consequence be a little delayed and individual spikes not quite so fine as usual. This, however, will comprise the amount of harm for which the late severe weather is likely to be answerable. Another "special" plant, very different to the *Montbretias*, but which may be here appropriately mentioned, as it is often associated in a cut form with these Cape bulbs, is *Gypsophila paniculata*, a plant that has indeed risen very rapidly in favour. Little known a few years back, except in hardy plant nurseries, it is now a very general favourite—evinced by the fact that there are few summer shows where it may not be found both as a pot plant for groups and in cut form. It is, fortunately, a plant of very easy culture in ordinary garden soil, tiny clumps producing the first season very large heads of flower. Like the majority of the better-class herbaceous plants, it likes a bit of good soil, to which a little manure has been added at planting-time and an annual winter mulching. Following up the thought expressed earlier in these notes that some of the common flowers take rank as among the most delicately beautiful, one must say a good word for *Saxifraga umbrosa*, the old London Pride, a charming flower for vases. A less known plant, but also in its way very beautiful, is *Heuchera sanguinea*. *Alstroemerias* might be grown more extensively where quantities of cut flowers are required; they possess the merit of standing well in water. Essentials towards their successful culture are a sunny, well-drained, trenched border, fairly deep planting and a heavy surface mulching. Writing of hardy flowers brings the reminder that as the time for the formation of schedules in connection with cottage garden shows is now fast approaching, it is as well to draw attention to the necessity for accuracy in the wording of those classes that deal with collections of cut flowers. They should be classed as hardy herbaceous or as annuals, as the case may be, and not indoor or outdoor flowers, or one often gets varieties that may be grown out of doors through the summer months, but which have actually come from the shelter of a greenhouse. Also where practicable it is advisable to give one or two prizes for the best flower garden. One is met sometimes with the remark, "But it is so difficult to judge a flower garden," but I do not think there need be any real difficulty, for a true cottage flower garden

(always subject to order, neatness and good arrangement) should be one from which the greatest amount of pleasure is derived, planted to secure a long flowering season—not a display for two or three months and bare earth the remaining nine, but something to look at and admire the greater part of the year. E. BURRELL.

Claremont.

ORCHARD AND FRUIT GARDEN.

PEAR BEURRE D'AREMBERG.

THE accompanying illustration shows a fruiting branch of that good Pear Beurre d'Arenberg, which comes into use during December and January. It is a tree that bears well either as a cordon or standard, is hardy, and as a stock the Pear or Quince may be chosen, as it does well on both. The flavour of the fruit is rich and juicy.

GRAPE MRS. PINCE.

As grown in these gardens, Mrs. Pince is a grand Grape, the bunches being large, well shaped, and the berries excellently coloured. Taking one season with another, the bunches weigh individually from 5 lbs. to 7 lbs. The largest bunch I ever had of this variety weighed 9½ lbs., and was well finished. One of the most fertile causes of failure is over-cropping; in fact, I know of no other variety of Grape which suffers to such an extent from this evil as Mrs. Pince. Being naturally a large-bunched variety, some people cannot resist the temptation to leave more bunches than the Vine can possibly finish; consequently the berries fail to finish, taking on that "foxy" tinge and commencing to shrivel early. Not only are the Grapes spoiled for the season, but an inherent weakness is laid in the Vine, with the result that the following season the berries fail to set properly. Far better is it to limit the number of bunches annually, with the certainty of their finishing up well. A long season of growth is also needed, the Vines being started the first week in March. A little warmth is kept continually in the pipes at night right throughout the season; in fact, this is the practice I adopt with all Grapes, whatever the nature of the season, a little ventilation also being kept continually on. If the vinery is kept too hot and close, the Grapes are ripened up too quickly; whereas time is needed for laying on colour. As this treatment produces both good Alicante and Lady Downe's, there is no need to have a separate structure for Mrs. Pince. A dense shade about the bunches is also detrimental to a good finish. The laterals must be thinly trained, as quite as much light is needed for this variety as for Muscat of Alexandria. I came to this conclusion on noticing that the sides of the bunches which were most exposed to direct light took on the deepest colour. Mrs. Pince is growing here at the west end of a lean-to vinery; consequently more light reaches the bunches than if the Vine were grown in the middle of the house.

I have no trouble in securing a good set, but the precaution is taken of drawing the hand over the bunches daily whilst in flower. If any other variety is in bloom at the same time, the hand is drawn over these first to gather pollen. The temperature also at this period must be well maintained both by night as well as by day. If the Vine should be in flower during a wet and dull time, the atmosphere must be kept buoyant by the use of more artificial heat. A. YOUNG.

Abberley Hall, Stourport.

**Apple Loddington Seedling.**—This is a large kitchen variety, and may be termed a mid-season fruit. My experience of this Apple is that it closely resembles the Keswick Codlin as regards

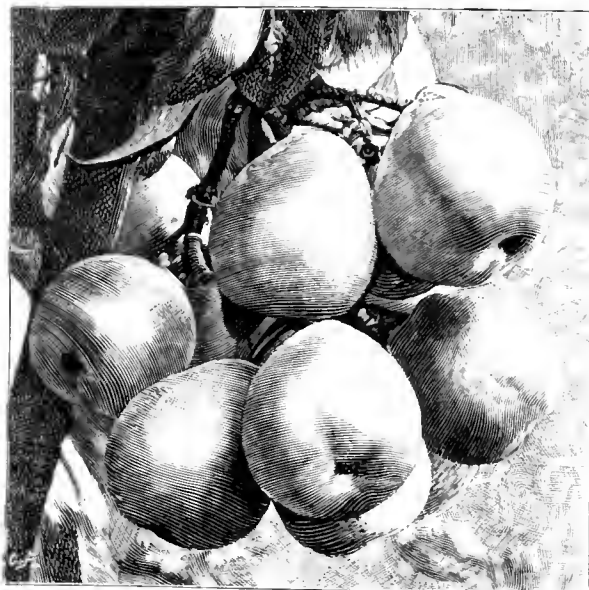
its cropping qualities, as it rarely fails to bear. I do not know of any kind more suitable for grafting on to old standards which are worthless. I saw some old standards of this variety last season in the west of England doing grandly. These had only been grafted a few years, and I was told a good price was obtained for the fruits. Many growers who have old, worthless trees and who may wish to regraft would do well to try this variety. It also does well on the Paradise.—S. H.

**Rivers' Early Nectarine.**—The favourable descriptions given of this early Nectarine by growers who had proved it prompted me to secure a pot-grown tree for permanent planting in the early house, believing that the slightly extra cost would be a gain in early fruiting. I previously had established trees of Lord Napier and the old Elruge, which, however, did not ripen their crops till the end of May, while Alexander, Early Beatrice, and Waterloo Peaches were ready in the first week of that month. The new Nectarine was planted towards the end of December, and by the middle of January was in full flower. Early blooming does not always imply a corresponding early ripening of the crop in Peaches or Nectarines, but it certainly appears to justify the

the hedge at the bottom of Mr. Mannington's garden, and always had a stunted appearance. With me it is free from canker, having a slender habit of growth. It makes a good pyramid and espalier, and comes into bearing early. Mr. Mannington was a butcher by trade and an enthusiastic pomologist, taking a great interest in all kinds of fruit. I used to often see him sitting at his door when passing in the summer-time, and he delighted to point to the large Wistaria that covered his house and shop. He died at the house he had occupied for years on September 19, 1880, at the ripe old age of ninety-three. Often as I pass the old shop I think of the man who did so much to encourage fruit cultivation in this neighbourhood, and so long as the Apple that bears his name is in existence his perseverance in trying to improve our fruits will be borne in mind.—H. C. P.

**Apples and canker.**—According to my experience, King of the Pippins is liable to canker very much when worked upon the Crab stock in heavy soil if the roots are not kept near the surface. This is one of the varieties that can be depended upon to fruit every year. Trees of it planted in the ordinary way will show canker the second year when growing in heavy cold soil, but by lifting them on to the surface and mounding the roots up the canker will be checked, the trees making a clean free growth almost directly afterwards. Trees of this variety planted deep in a cold soil will produce a quantity of fruit, but many of them will be badly affected by the Apple scab. My experience of canker in Apple trees is that it is the result of an unsuitable soil, aggravated by deep planting.—E. M.

— Mr. J. Douglas (page 75) is quite correct in inferring that I held no bigoted opinion on the subject of the liability of Apples on the Paradise stock to canker. Two cases, however, have come under my observation in which canker has attacked the Paradise and spared the Crab. In one case the trees on the Crab are three years older than those on the Paradise, were planted three years earlier, and came from a different nurseryman. The two varieties of stocks occupy adjacent plots of land; both looked in the best of health when planted, but a third of those on the Paradise are now affected by canker,



Pear Beurre d'Arenberg. Engraved from a photograph sent by Miss A. Worsley, Rodney Lodge, Clifton, Bristol.

while those on the Crab are free from it. In the other case, which as an example is still more striking, the trees, on Paradise and Crab, are planted alternately in the rows, each row consisting of one variety of Apple. All these trees were planted at the same time and came from the same nurseryman. In some of the rows the trees on the Paradise are cankered, while those on the Crab (of the same variety) are clean. It has occurred to me that the dwarfing stock by stunting the tree may, under certain circumstances, render it liable to the attacks of a disease which the freer stock is vigorous enough to grow away from, if I may so express it.—S. W. F.

advance claimed for it by the raisers in point of earliness in ripening. Lord Napier will be fully three weeks later in coming into full flower, although started early for the past three or four years, when the new Early Rivers probably has not been forced at all. This latter has, like Lord Napier, very fine flowers, and must have close attention in fertilising to get them to set properly. When better known and the cost within easy reach of the general grower, this new variety must take a foremost place for early forcing, and if it ripens as reported, three weeks in advance of Lord Napier, this will not lose its value because of the succession it would furnish.—WILTSHIRE GARDENER.

**Apple Mannington's Pearmain.**—I was very pleased to see this Apple spoken so highly of on p. 76. On our cold soil it does well, and is one of the finest late Apples in cultivation. It is, however, seldom seen on the exhibition table on account of its size, and for this reason is not so extensively cultivated as it deserves to be. Those, however, who appreciate quality would do well to grow this. The fruit should be allowed to hang on the tree till late in the autumn, and if afterwards stored in a cool place it will keep sound till April. The original tree was found growing in

**Coloured Vine leaves.**—The note (p. 33) by "W. G. C." is quite opportune, and an interesting subject as well. There is not the slightest doubt but that the constituent properties of the soil have a marked effect upon the colour of Vine leaves. Nowhere in England have I seen such high colour as on the Vines in Scotland. A really splendid feature was made at the late Edinburgh Chrysanthemum show by Messrs. D. and W. Buchanan, of Kippen by Stirling, with Vine leaves only. For three days a ready sale appeared to be going on, so eager were the visitors to purchase these leaves for vase decoration. Black Ham-

burgh was especially golden in its colouring, and so were Gros Maroc and Alicante, not that dingy yellow which is very common in most vineries upon the approach of autumn, but a colour which is best described as a rich lustrous yellow. Barbarossa was exquisitely blotched with crimson, and so were Madresfield Court and Gros Colman. Alnwick Seedling was splendid with irregular blotchings of gold and green. From Mr. Buchanan I learnt that the soil in which the Vines were growing was especially porous, being light and warm, and therefore more adapted to natural colouring than where the soil is heavy and consequently colder. At the same exhibition classes were provided for vases or epergnes dressed with Vine leaves only, and an exceedingly rich display the dozen well-dressed stands made. In fact, no exhibit in the whole of an exceptionally large exhibition created more interest than the vases alluded to. In the vineries at Newbattle I noted also the same richness of colouring in the well-developed leaves of nearly all varieties. There again the golden tinge of the Black Hamburgh and Alicante was especially bright. It may be that here in the southern counties the foliage ripens and falls off more quickly than in the north, where the atmosphere is cooler in the autumn. Even as far south as Torquay, where the soil is particularly porous, I have not seen anything approaching the magnificent colouring alluded to in Scotland. At the Hull show an attempt was made to utilise coloured Vine leaves in association with cut blooms of Chrysanthemums, but the result was anything but satisfactory, owing mainly to the dinginess of the Vine leaves.—E. M.

**Apple Mere de Menage.**—Some growers find a difficulty in getting this variety to fruit freely, but my experience is quite the reverse. I have forty trees of it, and without exception they all do well. It is just the Apple to grow in soil that is heavy and retentive, provided pruning is not carried out upon too restrictive a method. By allowing the leading shoots free extension, fruit spurs are produced in quantity. Better crops are thus obtained from quite young trees. Apples from well-managed trees of this variety grow to a very large size and are of exquisite colour. As a cooking Apple *Mère de Ménage* takes a high position, keeping quite plump until the end of January.—E. M.

#### YOUNG PEACH TREES.

For the past month I have been watching a number of young Peach trees very closely, and in particular have noted which trees shed the most buds prematurely. Once more it has been proved that bud-casting is more due to the inherent weakness, if I may so term it, of some varieties, and more especially those of American origin. Early in the spring of 1894 about thirty maiden trees in six varieties were planted in a span-roofed house 135 feet long and 14 feet wide, and, all things considered, they have done surprisingly well. They had really to hold their own against Tomatoes planted out in cross rows 3 feet apart in the same house. All the favour shown to the Peach trees only amounted to a little decayed manure mixed with the ordinary sandy loam in the house and a clear semi-circular rooting space 4 feet across. As might be expected under such conditions, the growth was not excessively vigorous, or at all events grossness was avoided, but being maidens and not stunted cut-back or trained trees they grew quite strongly enough, many of the leading growths being allowed to form secondary shoots. These latter were freely thinned out, only those best placed for laying in being reserved. It should also be added that they were extra strong, well-matured maidens, and were not cut hard back, but instead of this were trimmed in and shortened to a length of 3 feet, this just bringing them up to the roof trellis and enabling us

to dispense with longer-stemmed, and therefore more expensive trees. Thanks to the comparative poorness of the soil and also the abundance of light admitted to the trees through large squares of glass with only stout sash bars to support these, the wood, as a rule, was thoroughly well matured, so much so in fact that there are numerous fruit-buds on young wood  $1\frac{1}{2}$  inches in circumference. At first I was under the impression that Early Alexander would hold its fruit-buds well, but latterly they have tumbled off wholesale, so that not many more than a dozen will remain on each tree other than what are found on the twigs or spray, of which there is, unfortunately, very little. Nor is Hale's Early behaving much better. There will be enough flowers left to give a crop, and that is about all. Next to these, also on the hottest side of the house, comes Crimson Galande, and these trees are the worst ripened of the lot, yet they are certain to flower profusely. They were so late in ripening, that I scarcely expected to see flowers on the greater portion of the shoots, but with few exceptions they are there. On the opposite side Bellegarde has the warmest end, and these trees are very freely budded, rather more so in fact than I care to see them, a little more vigour being desirable in this case. All the trees, and some have grown much more strongly than others, of Sea Eagle are in a very promising condition, and flower-buds will be removed extensively. Curiously enough, this fine late ripening variety is usually the first to flower in a mixed house, and with me is well ahead of the rest. Princess of Wales completes the selection, and of this we have the best trees, some of them having fan-shaped heads 5 feet through. Without being particularly well ripened, the wood is yet sufficiently well matured, and throughout growths 3 feet long are furnished with fruit-buds. There are no signs of dropping in the case of the four last named varieties, and before these lines are in print they will all be in full flower. This does not add much to what has been advanced on the subject of bud-dropping in previous years, but it is corroborative.

Perhaps the thought will strike some of my readers that I need not concern myself greatly about the free flowering or otherwise of such young trees, as they will surely not be allowed to fruit this season. But they will, and the greater part of them will each be expected to produce not less than one dozen fruits. This they will do without prejudice to future prospects, the crop serving to check grossness, without, however, unduly checking progress. Planting maidens just prior to the commencement of top and root growth, and in good sunny positions, is a very different matter to sticking in trained trees among old-established trees, where, perhaps, they have to be started early and are constantly otherwise at a disadvantage. In our case the main stem broke freely and strongly, but the sides of the house being unfavourable to growth of branches to within 3 feet of the ground, no shoots were allowed to form below, and only four or five above that height. These shoots, having all the strength of vigorous young trees thrown into them, never checked in their growth, but divided and in some cases sub-divided, so that quite large trees were formed. As will be seen, this is simply a modification of the extension system, and the trees will be aided to spread on much the same lines. Very little pruning has been done, only the more weakly shoots required for laying the foundation of a serviceable tree having been freely shortened back, and two or three badly ripened ends cut off in the case of Crimson Galande,

already alluded to. All the rest have been reserved to their full length and laid in thinly, some of the stronger growths being depressed somewhat, with a view to checking grossness near the centres. They are so well rooted in the border they shared at one time with Tomatoes that I have every confidence in their capability not only to give a crop averaging a dozen apiece, but also for rapid extension. This time Tomatoes and Kidney Beans in pots will occupy the 3-foot width of border reserved for the Peach trees, and these, with Veitch's climbing Kidney Bean, will largely occupy the centre of the house till syringing may be safely discontinued, when Tomatoes will again occupy the centre.

It is the pampered, much-pruned trees that seem most disposed to bud-dropping, unless, indeed, it happens to be the variety that is at fault. When they are planted in a rich border of considerable extent and are hard pruned, the growth is too full of sap to be really fruitful, and the evil is aggravated accordingly. Severe root-pruning or a bad attack of red spider will perhaps be the means of bringing such trees into a more fruitful state, but as far as growers for sale are concerned, the less need there is for such violent remedies the better it will be for their pocket. Those who will insist upon following the old lines, and in particular zealously removing all secondary shoots as fast as they form, must not be surprised at the first-formed shoots becoming too gross to be fruitful. Whether the buds on these over-strong shoots are malformed, or, what is more likely, become disconnected when the wood is swelling the most rapidly, matters little; the result is what concerns us the most. Those who find their primary growths too vigorous to be fruitful should reserve two or more secondary shoots on these, and they will ripen under glass without fail, always provided they are well exposed to all the sunshine and light possible. Not only do the secondary growths form and retain flower-buds in abundance, but most of the ends of the primary growths will also retain their buds. If there is good room for extension, these leading growths should not be pruned, but the side shoots ought to be shortened to about half their length at a joint where there is a central wood-bud and two side flower-buds. Young trees treated in this manner quickly cover their allotted space or occupy the whole roof of a small house, if need be, and are fruitful from the first.

W. IGGULDEN.

**Melon Victory of Bath.**—While fruit growers are hankering after novelties in Melons, as in other things, older and better tried varieties are apt to be lost sight of in the craving for newer kinds. Although Victory of Bath has been grown close upon twenty years, it is still one of the best green-fleshed Melons we have. Not only is its flavour of the best, but it crops freely, and is not disposed to crack just when ripening should take place, as is the case with some others.—E. M.

**Apple Lady Sudeley.**—I grow over 100 trees of this Apple and think most highly of it. Here in our strong soil it grows well and bears freely, the richly-coloured fruit selling well. It should not remain upon the tree a day after it is ready to gather, as it quickly becomes mealy. I do not wonder at the thin crop obtained by Mr. Crawford from trees grown as horizontal cordons, because it is one of those Apples that fruit the best from the points of the shoots. For this reason the cordon method of growing it cannot be recommended.—E. M.

**Covering the stems of outdoor Peach trees.**—When at Barham Court in the autumn I noticed that all the stems of the outside Peach trees within 18 inches of the soil were covered with pieces of Oak bark. Mr. Woodward in-



formed me that he believed the stems swelled much more freely when protected from the fierce heat of the sun during summer. Certainly the trees in question were remarkably clean and luxuriant. I know of no material better calculated to answer the purpose named than Oak bark. Where this cannot be had, virgin cork would answer equally as well.—E. M.

**Apple Cox's Orange Pippin.**—To me it is an astounding assertion to hear that too much praise is accorded to Cox's Orange Pippin. In this neighbourhood and further south—Devon—it is considered the best dessert Apple, not only for its fine flavour, but also for the freedom of growth of the tree and plentiful crop that it bears. I have also heard it said that as a standard or half-standard tree it is a failure. My experience is the opposite. Here in a strong soil it grows vigorously, is free from canker, and crops abundantly, even when young. Bush-grown three-year-old trees planted in the autumn of 1890 produced fifty really fine fruits in 1893. No difficulty is ever experienced in obtaining 8s. per bushel for good samples, while as much as 12s. have been obtained.—E. M., *Swanmore Park*.

## ORCHIDS.

### HABENARIAS.

THESE cannot be regarded as popular plants, although some of the species, if well grown, compare favourably with others that obtain a far greater share of attention from orchidists. As some of the principal cultivators seem to have taken them in hand, however, it is to be hoped that others will follow their example, and that in future we shall see more of such fine species as *H. carnea* and *H. militaris*. The genus is widely distributed over the Old and New World, at least four species, or perhaps more correctly varieties, being included in our British flora. The culture of the tropical kinds is by no means difficult providing a sufficiently high and moist temperature be maintained. If newly-collected roots are procured they may with advantage for the first season be grown in a compost consisting largely of Sphagnum Moss, only a little fibry loam and potsherds being added. This will encourage the growth of the fleshy roots, which it is of the utmost importance to keep intact. Established plants require careful handling and should be potted in equal parts of peat, fibry loam, and good leaf-mould, with chopped Sphagnum and finely broken crocks to keep the mixture open. Opinions vary as to the best time for repotting, some cultivators choosing the spring for this operation, others maintaining that the most suitable time is immediately after flowering and before the stems die down. This is in order that the roots which are then produced are not afterwards disturbed. I have personally had good results from repotting at the latter season, but I am open to conviction, and I think it would be very interesting if those cultivators who have tried both would record their experience for the benefit of readers of THE GARDEN. While growing freely the plants may safely be treated as semi-aquatics, the soil at no time being allowed to get quite dry. Less water is of course required while at rest, and they must be kept during this period in a cool moist house. The hardy indigenous species are easily grown on a sheltered shady border or rockery, and if such as *H. bifolia* or *H. chlorantha* once become established, they thrive under trees or on the edges of shrubberies. They like a rather tenacious loam containing a good proportion of chalk. During the very dry summer of 1893 I lifted many clumps of these kinds while in flower from the woods in this

locality, and these are now well established on a large rockery under the dense shade of Beech trees, where little but Ivy and hardy Ferns can be induced to flourish. The hardy North American species thrive best in a lighter compost, Sphagnum, peat, and leaf-mould being the chief constituents. They should be grown in a sheltered position, and although they like shade in summer, this must not be too dense, as after flowering they require a certain degree of ripening. A covering of leaves or cocoa-nut fibre refuse should be applied during winter to all the hardy kinds, and a sharp look-out must be kept for slugs and other insects in the spring.

*H. BIFOLIA* is a native of Britain and common in woods and pastures. The flowers are produced in upright spikes; they are white and deliciously fragrant, especially in the evening or after a shower.

*H. CHLORANTHA* is a larger growing and flowering kind. The nectary of this is more elongated, forming a kind of spur. This is not so common as *H. bifolia*. There are many intermediate forms between these differing both in colour and size of flower. This is also sweetly scented, and a fine plant for a rockery.

*H. ALBA* is a very pretty little species, common in some parts, but rarer in others. It is not so strong in growth as the preceding, and should have a little peat or leaf-mould in the compost. The bloom-spikes are about 6 inches high, and bear about a couple of dozen of the pretty little white flowers in late summer.

*H. VIRIDIS* is, as the name implies, a green-flowered kind, and not so ornamental as either of the preceding. It is easily grown, however, and should be included in representative collections. This also thrives well under trees in a damp situation, where it grows about 6 inches high.

*H. BLEPHARIGLOTTIS* comes from North America, and is quite worth the little trouble necessary to grow it well. The lower leaves are oblong, green, the spikes leafy, and bear a large number of flowers, white, with a delicately fringed lip. It attains a height of about 20 inches, and has a very graceful effect when in flower.

*H. CILIARIS* grows over a foot high and is somewhat similar to *H. blephariglottis*, but the flowers are bright orange. This is also a native of North America, and though an old plant in cultivation is not often seen.

*H. FIMBRIATA* is a fine strong-growing species from the same country. It produces in summer long spikes, bearing a number of purple flowers about an inch across, with a broad fringed lip.

*H. CARNEA* is an exceedingly fine and showy species recently introduced from Singapore. The flowers are large and bright flesh colour, fading to white. The leaves are deep green with white spots, making a very attractive plant even before the flowers open. It requires the heat of the East India house.

*H. MILITARIS* is the brightest and showiest in the genus, being of the most brilliant scarlet in front, the hooded portion lighter. The spikes are leafy, crowned with loose racemes of flowers, somewhat resembling a very brightly coloured *Calanthe Veitchii*. This is a native of Tropical Asia, and flowers in September and October.

*H. MARGARITACEA* is not a showy-flowered species, but has prettily variegated foliage. The pure white blossoms are produced in summer.

*H. SALACCENSIS* is a native of one of the Sunda Isles, and grows a foot high. The loose racemes of flower are not very attractive. The petals are narrow, dingy red, the sepals and lip greenish white. It blossoms in May and June. A species named

*H. CINNABARINA* was introduced some two years ago. The flowers of this kind are described as cinnabar-red, with deeper spots upon the sepals. H. R.

**Epidendrum cochleatum.**—This is a curious and distinct species which, although of very early

introduction, is now seldom met with. It appears to have first flowered at Kew over one hundred years ago, and is a native of the West Indies and Central America, where it has a very extensive range. It is also reported to have been discovered growing in very limited numbers within the United States of America. The peduncles grow erect and terminate in a raceme of from five to eight flowers. These have greenish-white sepals and petals and a curious concave lip, which is pale yellow blotched on each side with maroon-purple. The name is derived from the formation of the lip. It should be grown in the Cattleya house. It is now nicely in bloom with Mr. H. Grubing, of Harrow Weald.—W. H. G.

### ANGRECUMS.

NOT many of the species of this fine genus receive the attention they deserve from cultivators, but why it would be difficult to say, as they are nearly all free-flowering, useful plants. The larger-growing kinds when in good condition are very ornamental even when not in flower, but when well flowered they are truly noble objects. These should be grown in the warmest house, and may be arranged on the central stage, as they need not be close to the glass. A good light position is, however, necessary, and the plants thrive best in a somewhat drier atmosphere than *Acerides* or *Phalenopsis* require. This latter is not absolutely necessary to their well-being, but I mention it because, in arranging a miscellaneous house of plants, consideration of these small details is of importance, and the closer the wants of the individual species are studied, the greater will be the success of the cultivator. They must be grown in pots large enough to take the roots easily, and these should be filled rather more than half their depth with potsherds. Clean Sphagnum Moss and charcoal should be used for the compost, the fresh-growing points of the Moss being dibbled neatly over the convex surface. The smaller-growing kinds are most satisfactory in small wooden baskets or shallow pans suspended not far from the roof glass in the same house. The baskets have a more rustic appearance, and the plants thrive equally well in either, but they usually transplant better from the pans than when the roots have become much entwined about the rods of the baskets. These also like growing Sphagnum about their roots, but only a mere surfacing is required, as the latter will not thrive if deeply imbedded in the Moss. They must never be dried, but while resting less water is, of course, required than during the growing season.

*A. ARTICULATUM* is a pretty dwarf-growing kind, the leaves being somewhat wedge-shaped, about 5 inches in length. From the axils of these the many-flowered racemes are produced. The blossoms vary a good deal in size, form and length of spur, this latter being very fine, and when several are seen at a distance they have almost the appearance of a deep white fringe.

*A. CAUDATUM* grows about a foot high and produces in summer long racemes of flowers. These are not very attractive in colouring, but remarkable for the tail-like spur, which attains a length of about 9 inches. This rare species is a native of Sierra Leone.

*A. EBURNEUM* is a very large-growing kind, with light green, leathery leaves 18 inches in length. The flower-spikes are produced in winter and early spring and last a very long time in perfection. They are rather stiff in appearance and the flowers are greenish white, with the exception of the lip, which is of the purest white.

*A. EBURNEUM SUPERBUM* is superior to the type, being larger and wholly pure white.

A. ELLISI is a charming Orchid, blooming in mid-winter and sweetly scented. The flowers occur on gracefully arching racemes and are pure white, with the exception of the brown-tinted spur. This was named after and introduced by the late Rev. W. Ellis, who was a distinguished traveller and writer on Orchids.

A. SANDERIANUM, also known as *A. modestum*, is of the dwarf-habited section, growing only a few inches in height. The leaves are deep shining green and form a delightful contrast to the pure white flowers. These are produced in spring and last a long time if kept dry. They are small, with a spur 4 inches in length and a rather broad, pointed lip.

A. SESQUIPEDALE is well known and a truly magnificent Orchid. The spikes bear from two to four flowers, each 8 inches across, with a spur occasionally 18 inches in length. This grows very strongly, about 2 feet high, the leaves deep glaucous green, and 12 in. in length. The late-flowering form of this Orchid is the better, being larger-flowered than the type. Occasionally, owing to being kept too cool during the winter, the lower tiers of leaves fall, giving the plants an untidy, lanky appearance. The present is a good time to improve such plants by cutting them off below the principal roots and setting them with the lower leaves resting on the compost. This and all the species named above, except *A. caudatum*, are natives of Madagascar. There are many other fine species in the genus, but these are perhaps the best known and most desirable. H.

**Calanthes at Harrow Weald House.**—This most useful winter-blooming Orchid is exceedingly well grown by Mr. Rapley, and for some considerable time past a fine display has been maintained. *C. Turneri* is largely grown, and its white flowers are very welcome after those of *C. vestita lutea* and *C. v. rubro-oculata* are over. *C. Turneri* is a very distinct species from Java, and produces finer spikes, with more blooms, the rich rose coloured eyes contrasting well with the other pure white parts of the flower. The charming hybrid *C. Veitchi* is here seen to perfection, for not only is there a large quantity, but the flowers are exceedingly fine, some of the spikes measuring over 4 feet in length and bearing fifty-seven blooms. Amongst others in flower very conspicuous were several plants of the now-seldom-seen *C. rosea*, or, as it is perhaps better known, *Limatodes rosea*. This is a most useful plant for decoration, the flowers of a beautiful shade of rose, from light to dark.

**Zygopetalum erinitum.**—This beautiful plant is now flowering well in the collection of Mr. H. Grinling, of Harrow Weald House. By some authorities it is considered a distinct species, whilst others place it as a variety of the popular *Z. Maekayi*, which it very much resembles both in growth and in the shape and colour of its blooms, the latter being usually somewhat smaller. The pseudo-bulbs are about 18 inches in length, and the scape which springs from the base of the bulbs often carries seven or eight fine flowers. These individually are about 3 inches across, the sepals and petals greenish-yellow, blotched with purplish-brown, whilst the white lip is beautifully veined with bright blue, these veins being fringed with short hairs. This, however, is the best variety, for there appears to be another form in cultivation which is very similar in every respect, but having the veining on the lip of a rosy-pink colour, which is neither so attractive nor beautiful as in the preceding. This fine plant is a native of Brazil, where it grows abundantly on the Organ Mountains. It first made its appearance in this country just sixty years ago, and should find a place in every collection, however small, on account of its easy cultivation, for not only is it one of the most easily managed Orchids, but the same must be said of the majority of sorts in this genus. The plants should be potted in fibrous peat and Sphagnum Moss, and a little silver sand added, with good drainage, for they enjoy a plentiful supply of water, especially during the summer

months. This kind enjoys being repotted annually. This should be done when fresh roots are commencing to grow. The Zygopetalums succeed well with the Cattleyas, and during the summer require to be shaded from the sun.—W. H. G.

#### SHORT NOTES.—ORCHIDS.

**Odontoglossum Cervantesi roseum.**—I recently noticed a remarkably highly-coloured form of this fine plant carrying several fine racemes of flowers. These individually were large and of good substance, with the usual curious markings of rich brown at the base of each segment, the whole suffused with deep rose. It is a very fine variety.—W.

**Maxillaria venusta.**—This is a very showy species, producing fine blooms, quite 6 inches across the lower sepals. The sepals are spreading, pure white, the petals also white, but much smaller and standing out almost parallel with the clavate column; the lip is short and fleshy in texture and of a brownish yellow on the upper surface. This Maxillaria is a native of Venezuela and New Grenada, and is a striking object when in flower.—W.

### GARDEN FLORA.

#### PLATE 1001.

##### AUTUMN OR WINTER DAFFODILS.

(WITH A COLOURED PLATE OF STERNBERGIA MACRANTHA.\*)

THE accompanying plate represents a class of bulbs to which far too little attention is given,



A clump of the Winter Daffodil (*Sternbergia lutea*).

and for this lack of interest the uncertain character of our late autumn and winter months is, no doubt, accountable. The yellow Crocuses help to carry us through the dull months, but the flowers of the Sternbergias, being of much firmer texture, are able to withstand a far greater amount of bad weather than those of the Crocuses, and are thus better adapted for our climate. One great source of failure with Sternbergias and many others of a like nature is the fact of their being frequently grown in such positions as to necessitate their being disturbed at the wrong time or before growth has fully developed. In one or two gardens I have seen these grown in flower borders and lifted

\* Drawn for THE GARDEN by H. G. Moon in the Royal Gardens, Kew. Lithographed and printed by Guillaume Severeys.

early to make room for bedding plants, and the wonder was that they never flowered. What these Sternbergias want chiefly is, thorough ripening in summer and a slight protection, such as dry litter, &c., during the winter. It will depend upon the nature of the soil, as well as the position in which the bulbs are grown, whether they will have to be lifted or not. If the soil is heavy and clayey, the best plan will be to lift the bulbs when the leaves have died down and let them ripen, in the same way as those of *Anemone fulgens*, &c. In light sandy soil and fully exposed to the sun, the bulbs will in all probability get the necessary ripening without being lifted, and in this case the only plan will be to leave them undisturbed until they attain flowering size.

The species, as described and arranged by Mr. Baker, are as follows:—

**S. COLCHICIFLORA.**—This is one of the old garden plants, having been cultivated by Clusius and Parkinson—by the former as *Narcissus persicus*, and by the latter under the name of the lesser autumn or winter Daffodil (*Narcissus autumnalis minor*). It is described as possessing the most delicious fragrance, and perfuming, with its Jessamine-scented flowers, the fields of the Crimea, especially about the Bosphorus. The leaves are narrow, linear, and produced along with the fruit in spring. The flowers appear in autumn at about the same time as those of *S. lutea*, perianth segments nearly 1½ inches long, and of a very pleasing pale or sulphur-yellow. It is found on dry exposed positions on the Caucasian Mountains, Crimea, &c., and is perfectly hardy in this country, treated in the same way as *S. lutea*. *S. dalmatica* and *S. pulchella* are varieties.

**S. CLUSIANA** (Ker, not Boissier).—*Narcissus persicus* (Clusius), *Amaryllis citrina*, *A. colchiciflora*, *S. atnensis*, and *S. Schuberti* are synonyms.

**S. FISCHERIANA** is nearly allied, and has the habit of *S. lutea*, from which it differs chiefly in flowering in spring instead of autumn, and by its stalked ovary and capsule. It is a native of the Caucasus, perfectly hardy in this country, and is the *Oporanthus Fischerianus* of Herbert's "*Amaryllidaceae*," 46.

**S. LUTEA.**—This is the great autumn or winter Daffodil (*Narcissus autumnalis major*) of Parkinson. The absence of seed on this bulb in a cultivated state is rather remarkable, seeing how plentiful it is and also how profusely it flowers in many parts of the country. The only seed I have seen has been obtained from dried specimens collected in the neighbourhood of Palestine. The same experience has been recorded by Dean Herbert in his "*Amaryllidaceae*."

My experience leads me to the conclusion that the bulbs must be large before they will flower freely, and, as is usually the case with imported bulbs, they are generally small and will take a year or two to attain flowering size. *S. lutea* has five or six leaves, each about half an inch broad, about a foot long, and produced at the same time as the flowers in autumn and winter. It is the *Amaryllis lutea* of the *Botanical Magazine* (290), *Oporanthus luteus* of Herbert's "*Amaryllidaceae*," and is supposed by some writers to be the Lily of Scripture, as it grows abundantly in the vales around Palestine, &c.

**S. ANGUSTIFOLIA** appears to be merely a narrow-leaved form of *S. lutea*. It is very free-flowering, and grows rather more freely than *S. lutea*.

**S. GRECA**, from the mountains of Greece, has very narrow leaves and broad perianth segments.





*S. SICULA* is a form with narrower leaves and segments than the type, while the Cretan variety has considerably larger flowers.

*S. MACRANTHA*.—This, introduced by Mr. Whittall from the mountains of Smyrna, is a really handsome species, as will be seen by the coloured plate. The leaves are blunt and slightly glaucous, about an inch broad when fully developed about midsummer, flowers bright yellow, produced in autumn. A native of Palestine, Syria, Western Persia, Asia Minor, &c.

D. DEWAR.

*Botanic Gardens, Glasgow.*

## THE WEEK'S WORK.

### FRUIT HOUSES.

**BANANAS, HOME-GROWN.**—These are now largely grown in private gardens for dessert, and those who have a liking for them well know the value of those home grown. Now is a good time to make a start where it is intended to take up their culture, and many who possess modern houses can grow the Cavendish variety, as this kind is dwarf and fruits freely and quickly. I saw a house containing six plants planted some eighteen months ago. These had borne on an average 67 lbs. weight each, and in a period of fifteen months. The value of *M. Cavendish* is its dwarf compact habit, compared with that of other kinds. The plants range from 6 feet to 7 feet high and they require far less heat than others. Many can find space for this plant who have only medium-sized houses; indeed, in such houses better fruits can be had than in those where the plants are a long way from the glass. I consider *M. paradisiaca* the best, but few can grow it, as it requires so much room. It produces a small fruit in comparison to its size and immense leaves. *M. sapientum* is nearly as large, but bears a much larger bunch. In my opinion it is not superior in quality to the first-named dwarf useful variety, as it takes longer to make a plant and the fruits are longer in ripening when formed. There are various forms of this variety, some nearly green, others with dark or purple fruits. Most of them attain a height of 20 feet and have leaves each 10 feet to 12 feet long. These three varieties are about the best for house culture if the fruits are grown for dessert.

**CULTURE OF THE PLANTS AT STARTING.**—I have advised a suitable house for the plants, but it must not be thought that the plants cannot be grown in pots, tubs or in a restricted area, as in the latter they do well. To get rapid growth it is essential to grow in rich soil, and maintain a high temperature and a humid atmosphere during growth. The plants fruit freely with only top-heat, but are much longer about. In making a bed for the roots give abundant drainage and 2 feet to 2½ feet of clear soil, and if possible restrict each plant to a certain space. The plants should face south, so that they can get the full sun most of the day in a span-roofed house. Bananas like a strong loamy soil, with manure (well decayed) and such aids as bone-meal or other fertiliser. As they require plenty of water during growth, it is well to add broken charcoal to the soil to keep it sweet. Plant firmly and water sparingly at the start. When the plants are purchased one cannot obtain them so large as one would like. It is not well to plant weak suckers with only a few roots. I would prefer to pot up the suckers till they have filled 8-inch or 10-inch pots, and plant out in April or May. If potted up now and plunged in a warm bed, good plants will be had in from six weeks to eight weeks. Such plants will start well when planted out and fruit freely next spring; whereas if planted out in a small state, especially when there is no bottom-heat, they present a miserable appearance all the year, and in some cases do not fruit at all. There is much gained by growing as advised, as the plants are in condition to rest during November and December. Having made

a strong growth, they may be kept cooler and drier at the roots during the time named, and will then throw up fruits during the spring, such fruits being appreciated in the late summer or autumn. I have advised a restricted root space. This is to hasten ripening or formation of fruit, as when there is a too free root-run fruits are not so reliable. A bed 2 feet to 3 feet deep and 3 feet to 4 feet square will grow good fruits if room is not plentiful. The temperature at the start should be 70° to 80° by day, 65° to 70° by night, with an unlimited supply of atmospheric moisture. Fruiting in pots is very much like that advised above. Now is a good time to make a start. Give bottom-heat at first, and do not over-pot. I prefer to get the plants into 10-inch pots before shifting them into their fruiting ones.

**HARDY FRUITS.**—With protracted frost in most parts of the country, the work in this department has not made much progress. With open weather there should be no delay, and the pruning of most kinds of fruit trees should be finished, as many of the earlier varieties will soon be on the move. The work in the orchard should not now be neglected. Any old standard trees that have been neglected of late years may with advantage receive attention in the way of pruning, removal of cross wood or barren growths thus admitting light and air. I do not advise severe pruning or topping of branches as is at times practised, but much may be done by timely thinning and admission of more sun and light. The training of all wall fruits, with the exception of Peaches, Nectarines, and Figs, should be finished. I am glad to see the trees have benefited by the severe weather, as the buds are not so prominent as they were last season early in December. In the case of newly planted trees it is not advisable to prune till late in March or early April, merely cutting or shortening long shoots. Many good fruit growers do not advise even this the first season, but much depends on the vigour of the trees when planted and soil and situation. The planting of all fruit trees should be brought to a close as early in March as possible, as in light, gravelly soils they suffer in a hot, dry summer. After planting, a good mulch of decayed manure with a little rougher material on the surface should be given. Staking newly-planted trees should not be neglected, giving them ample space to grow. From Fig trees on walls that have been very thickly covered, a small portion should be removed as the season advances. Apricot trees on south-west aspects promise well, and should get protection ere long. I have found a simple and efficient protection is to use stout Bamboo rods secured to the wall at the top and lightly pushed into the soil at the base, covering with a double thickness of inch-mesh net. This admits light and answers thoroughly.

**STRAWBERRIES.**—The older plantations will repay surface cleansing and removal of weeds and old decayed leaves, mulching with decayed manures. In light soils this dressing is important, as the roots get bare on the surface and the new material gives these a start and builds up the plants. In gardens where the soil is light and manure none too plentiful, I have used such aids as old beds of Melon or Cucumber pits with a good portion of heavy soil. Previous to placing the manures on the surface do not fork or dig the surface, merely hoe lightly and remove weeds. The frost will have lifted the young plants which were planted last August or September. These should be trodden in firmly before hoeing between the rows. When the weather is open is a suitable time to apply liberal dressings of soot between the rows.

**BUSH FRUITS.**—The pruning of Currants and Gooseberries should now be finished by this date; the pruning of the latter is often deferred till the last moment on account of the birds. I always prune early and net over, as otherwise it is impossible to get a crop. In pruning, well thin out the head to facilitate gathering the fruit, cutting away the growth lying on the soil and removing all suckers. The trees well repay a good surface dressing of rich manures. Should the cater-

pillar have been troublesome, it is well to draw away the surface soil, wheeling it away and giving a good dressing of fresh lime before giving new soil. If nets are not available it is well to syringe the trees after pruning with quassia water, and then dust over whilst damp with quicklime. It is necessary to dress Currants also, as the birds soon spoil a quarter if not checked. The same remarks apply to Currants as regards manure at the roots in the form of surface dressings. Young trees that are being grown now to form new plantations should be replanted, as by change of soil better growth is secured, and crowding in a young state will spoil the shape of the trees.

G. WYTHES.

### THE KITCHEN GARDEN.

**TOMATOES.**—Where winter fruiting plants have plenty of room to extend, the latest formed growth will now be furnished with a good percentage of blooms. These if carefully fertilised will set with more certainty than the December and January formed flowers. Fertilise daily at noon, withholding floor sprinklings until the afternoon, as at this date Tomatoes are benefited rather than otherwise by a comparatively dry atmosphere, a more wiry and fertile growth being thereby encouraged. If the plants are not standing too closely together, a few shoots may be trained up from the bottom, say one on each side, to produce fruit later on and thus keep up a succession. Remove at once all side laterals and top-dress as soon as new white feeders appear on the surface, adding or withholding a fertiliser, according to the strength of the plants. During the continuance of bad weather, 60° to 62° as a night temperature will be the best for the plants, 65° being allowed when mild and open. A little air must be given on all sunny days, but draughts strictly guarded against, as the tissues of the young leaves are very tender. Young plants raised from seed sown in January will now be sufficiently advanced to need support. Neat sticks should be used and the ligatures left rather slack, as Tomato stems swell very rapidly. Arrange the plants close to the glass and water very carefully, especially where heat is deficient, or the "yellows" may set in and ruin the batch. Upon no account should the syringe be used overhead, and a dry atmosphere at nightfall should be maintained till the weather gets warmer.

**VEGETABLES IN FRAMES.**—Early Potatoes and Currants being brought on by means of hotbeds have had an unfavourable time lately. With from 16 to 20° of frost and cutting winds for many nights in succession, not only double mats, but thick coverings of long litter or Bracken have been necessary to keep the interior of the frames in anything like a comfortable, not to say forcing condition. As much outdoor labour has been impracticable, there has been ample opportunity for adding fresh heating material to the surface of the linings, this being elevated, so as to come on a level with the lights, and well trodden. Extra coverings in case of continued frost must also be given to all tender crops growing in frames, hand-lights containing Cauliflowers and ridges of late Celery, as it is now certain that great breadths of greens of all descriptions, including Brussels Sprouts, Cabbage sprouts, late spring Broccoli, and even some of the Kales have already succumbed to the intense frost, and that the demand for young transplanting stuff will be greater this spring than usual. Lettuces at the foot of south walls, which are safe in any ordinary winter, must be covered with some littery material where the wall has kept the snow from falling on the plants.

**EARLY COS LETTUCE.**—Where much salad is in demand early in the season and a good quantity of plants of the old Brown Cos were framed in October, with a view to removal to the garden during February and March, it is a good plan in such seasons as the present to thin out the plants, leaving every second one to develop. If the frames are wanted for other things, they may be carefully

lifted with a good ball of soil and transplanted into rough, home-made frames, and protected at night for a time. A scarcity is thus avoided. Lettuce quickly respond to a moderate dressing of any safe artificial manure sprinkled on the surface and raked in. All batches taken from frames or pits and planted in the open ground will be the better for a screen of Yew boughs for a fortnight or three weeks, even when under a south wall. Mildew and damp are often very troublesome after a thaw, to counteract which a free use should be made of wood ashes, and the lights tilted instead of being drawn off in rainy weather. Where Hardy Hammersmith or All the Year Round Cabbage Lettuce were given frame protection these will now be invaluable, being full-hearted.

**AUTUMN GIANT CATTIFLOWER.**—It does not appear to be generally known that Autumn Giant if sown in autumn with Early London and Walcheren, protected through the winter, and put out in March, will do equally as well as any other sort, and afford fine heads from the middle to the end of July. Where this is not practised, seed may now be sown of both Autumn Giant and Self-protecting Autumn Broccoli. The former will then be fit for use immediately after the summer batches of Pearl and Walcheren are over and before the open-air March-sown batches of Autumn Giant are fit for use. Boxes answer well for sowing the seed in, and an intermediate temperature best favours germination. As soon as the seedlings are fit for handling, thin out freely, as crowded plants soon become affected by the disorder known as blackleg, which carries them off wholesale. At this stage a cool greenhouse with plenty of light and air suits them well until fit for pricking out into a frame or larger boxes. The Self-protecting Broccoli will heart in in October, and March sowings in the open will follow on through November and December.

**THE EARLIEST CELERY.**—The present is a good time to sow a pinch of Celery for a supply during September. A sufficiently large box should be used, so that the seedlings may not crowd each other after being thinned out, as a weakly constitution prone to bolting is engendered by too limited a space in infancy. Drain the boxes well and use light friable soil passed through a half-inch sieve, covering the seed very thinly with still finer material, and standing the boxes in a temperature of not more than 55; more than this is injurious. Immediately the first rough leaves are formed, prick out into larger boxes or on to a gentle warm bed if such can be afforded. Air can then be given as the plants increase in size and full exposure take place in April. Coddling is the greatest evil attending the raising of both early and later batches of Celery. For an early white variety Sandringham is still hard to beat, while Early Rose is a first rate red variety. Late Celery and that grown for flavouring may on the disappearance of frost be lifted and removed to a north aspect and carefully laid in, the ground being made firm round the roots as the work proceeds. It can then be covered in case of late frosts, and the ground turned up and got in readiness for other crops.

**ASPARAGUS BEDS.**—Many beds of this esteemed vegetable established on heavy soils and in low-lying districts cannot be surface-manured in autumn or early winter; indeed, on any but the lightest warmest soils and in elevated positions the system is not to be commended. The present month is the best time for the work. Fish manure is a capital stimulant laid on moderately, and will retain its strength better if slightly covered with light leafy refuse. I have seen very good results on very sandy soil from an application of pig manure in March, this being in a semi-decayed state and well saturated with the urine, the same being left on all the summer and the refuse raked off in autumn when the grass is cut down. If the summer should be dry this covering keeps the beds in a moist condition. Guano is a capital manure for heavy soils.

**HERB BEDS.**—Weather permitting, the herb order should be seen to and all exhausted stocks

renewed. Thyme, both the common and Lemon varieties, may be increased by division, as also Sage, Tarragon, and Mint; in fact, the majority of herbs are best treated in this way. Some good fresh soil and decayed manure should be mixed in if the old sites have to be used again, but fresh ground where at command is preferable. After planting, a mulch of rough leaf-mould or spent Mushroom manure will protect the newly-disturbed roots.

**FORWARDING EARLY CROPS.**—As, owing to the continued frosts, early sowings of Peas and Beans, also planting of first early varieties of Potatoes, are some time later than usual, those who do not, as a rule, forward these under glass will do well to do so this season. Peas sown in small pots or boxes and placed in a genial warmth soon germinate, as also do Broad Beans, and after due hardening are planted out with little labour; thus the unfavourable effects of a snowy February may be greatly modified. As digging and general garden work will be plentiful as soon as the ground can be trodden upon, manure wheeling should be completed with all speed, as even if snow lies on the ground, a passage can be cut with shovels and the manure tipped into this.

**SEED UPBOARD.**—As soon as the new seeds come to hand a thorough cleansing should be given to the seed cupboard, each new package being laid most conveniently according to the time it will be wanted for sowing. Do not rely on old seed.

J. CRAWFORD.

## GARDEN SKETCHES.

### CHAPTER IX.

“Season of mist and mellow fruitfulness,  
Close bosom-friend of the maturing sun.”

KEATS.

**AUGUST 3.**—This evening falls the touch of autumn over hill and dale. The day has been one of dark clouds and showers. Now, towards sunset, the sky is clear, and an amber light falls aslant the valley. A wandering breeze ripples gently across the ripening corn and silvers the bending Willows as they yield their slender leaves to be turned aside. A purple glow on the hill-tops shows the heather in bloom, and lengthened shadows fall from the scattered woodland. In the distance the sea is deeply blue like a sapphire, flecked here and there with a white sail moving onward, while passing down to the shore come the gently flying seagulls with arched wings gleaming white against the deepening shadows.

The Rowan tree with its clustered berries of coral-red proclaims the harvest of the blackbirds, and the Japanese Roses are covered with crimson and orange fruit. A little while ago the white variety was very lovely, the milk-white blossoms and glowing berries mingling together, for the hips, like miniature Mandarin Oranges, were ripe much earlier than usual this season. These Japan Roses (*Rosa rugosa*) can be propagated by seed sown when ripe, and though there is a few years' waiting to be gone through ere they blossom, one has the reward of different tints among the flowers, and any one specially beautiful can be increased by suckers, which healthy plants send up freely. A sunny position seems needed for luxuriant fruiting, but the roots appear to enjoy a free and moist soil. Where there is room for hedges of these shining-leaved Roses they would be very beautiful, and their passing away in robes of gold and crimson would light up many a day in “chill October.” Tall Gladioli that have caught the western sun in the flower border rise like a flame from the earth, while the pure white blossoms of *Anemone japonica* are fresh and cool as they ramble through a shadier spot. This *Anemone* resents being disturbed, but as

the finest flowers are from fresh offsets or runners, new plantations require to be made from time to time, the dense and older portions being thrown away. It does not seem particular as to soil or position, but left to colonise itself under the light shadow of trees is perhaps its happiest home, for there in the dusky setting the blossoms gleam like wandering stars.

In the rock garden a group of *Hydrangea paniculata* has bending branches of creamy plumes, seen against the deep crimson of *Montbretias* clustered beside it. An undergrowth of some soft-tinted *Viola* would be lovely beneath these drooping panicles of bloom. This *Hydrangea* requires severe cutting back each spring to make it blossom freely. The Plume Poppy (*Boconia cordata*), with its erect growth, makes a fine break among low-growing shrubs; its glaucous leaves and wands of gold-brown buds, expanding into a white misty bloom, remain in perfection for a length of time, and they are exquisite arranged in a Japanese jar of red, white and gold. In a rich border it becomes too coarse and rampant, but a more repressed growth in a poorer soil quite alters its character to delicate grace. The blooms of *Eurothera macrocarpa* are flowing over a rocky ledge. The charm of these flowers is their little spotted tiger skins in which the buds are wrapped, and which they toss to one side as they expand; the blossoms also change to apricot hue when fading away. *Acena microphylla* is quite a sheet of bloom, with spiny globes of rose-pink clustered together. *Linaria alpina* is a rock gem, with its lovely purple flowers and stain of orange at the lip, and leafage into which the purple hue seems to have flowed. It seeds so freely around, that young plants are to be found far and near, the cinder path being specially to their taste. A mass of the white *Campanula pumila* falling over a rocky ledge has been a miniature cascade of blossom, with its low, dense growing bells tumbling over the stones.

**AUGUST 20.**—A few misty mornings have brought us that most exquisite sight, the spiders' webs bedewed with moisture! From every Lily's petal, from every Rose tree's branch, from every stem that holds a bud or blossom, are hung these gossamer webs. It is a sudden revelation. Where nothing seemed before, now we behold these intangible veils suspended from leaf to leaf, from flower to flower, and strung on every thread with infinitesimal pearls of moisture. So strongly do they show on the dark *Berberis* trees, that they suggest the idea of fairies' linen hung out to dry, linen of such gossamer texture as only spirits would don. But no sooner have the sun's rays dispersed the mist than the vision of beauty is gone.

Warm days have come once more after wind and rain. The grain has been harvested, and golden sheaves are laid together in the distant fields. The late Clover is full of murmuring bees and scents the air, and fields from which the hay has been gathered early show like emeralds amid the golden setting of ripened corn. The autumn Lilies are with us now. *Lilium tigrinum* makes a grand clump in the border, slowly opening and lasting from week to week in beauty, its rich warm colour showing up well against the dark evergreen background. It passes through storm and rain quite fearlessly, and asks but little more than a good top-dressing in November. *Lilium speciosum*, pink and white, is lovely springing up among the China Roses.

The Tritomas, with their torches all alight, have sent a glow throughout the garden. John Benary, a variety entirely crimson, seems almost to burn with a ruby light, so intense is its

crimson glow. These Tritomas are splendid for grouping where they can be seen against the sea or far-off hills. In a more limited space they are very fine against the fresh growth of young Fir trees with their bluish-grey hue, or in front of the climbing Virginian Vine, as it changes in tint to deep maroon. The best time for moving or division of these plants is during the month of April. They will then start quickly into growth, and if given an open sunny position and good rich soil, will rapidly become strong clumps. The earliest Starworts are now in bloom. How completely the beauty of these Western Daisies is lost when they are tied together in a bundle and fastened to a stake, all the grace of their stems destroyed and no possibility of blossoms developing but at the summit. How charming would an alley be of the taller kinds left to themselves to toss and fall and mingle at their own sweet will—a delicious boundary of soft and tender colouring such as all our efforts could not produce. Where growing in a border, a few slight leafless branches stuck among them will generally afford sufficient support, and when a spray falls down and flowers in that position, how beautiful it is! One of the most graceful Michaelmas Daisies is *Aster elegans*, the entire length of the stems being covered with sprays of pale mauve flowrets, so that the whole plant has the appearance of a haze of blossom. As these Starworts rapidly exhaust the soil, constant root-division is needful, the ground being well enriched when replanting. As the plants grow it is well in the early stage to thin out some of the stems, as the remainder have then room to spread, and a few stems seen in perfection of leaf and blossom in their entire length are far better than a whole mass smothering each other and with the base of the stems sere and yellow. Position does not seem of as much consequence to the Starworts as a deep and fertile root-run. *Rudbeckia Newmanii* is luxuriating in the late moisture; the rich orange-yellow discs with dark velvety centres make a fine flower group, especially just beneath the deep crimson leaves of the Virginian Creeper that is climbing over the garden wall. A handful of these rich sprays and leaves with the flowers of the *Rudbeckia* are lovely together. A little further off against the wall is a bush of *Crategus Pyracantha*, with its brilliant scarlet fruitage. A brick wall clothed with these glowing berries that seem to set it all afire is a sight not easily forgotten, while in spring the white lace-work of blossoms is almost as fair to see, and the deep green foliage that bears rough storm so bravely is cheerful all the winter through.

Very lovely are the *Cyclamens* now appearing over ground. One always finds them at first in bloom with a little start of rapture. They seem to have arisen so suddenly where nothing was before, and where the corns are large so as to produce hundreds of blossoms, their beauty is prolonged considerably; then as the flowers cease, uprise the finely mottled leaves to remain in beauty until the burning sun of another year's July. Seen to-day with white and rose-pink blossoms bordering the bed of Ivy-leaved Geraniums, they are charming, but still more so as they nestle in groups under the Deodar on the lawn, where at one side a few low branches were crushed to death by a tree since then removed.

The Sachalien Knot Grass (*Polygonum sachalinense*), in flower at present, has been hitherto known to us for its graceful flowering wands, beloved of the bees, but in this season of prolonged drought its claims as a forage plant have been brought forward prominently through the writings of M. Doumet-Adanson and by expe-

riments carried out in different parts of France with success. It has been calculated that grown for green fodder the yield would be per acre of from 60 tons to 120 tons. The vigour of this plant is irrepressible. Even in the hard-trodden pathway the young growths push upward, and for many yards around fresh rhizomes will press along underground and spring up in the most unexpected places. To ensure a beautiful group of this Knot Grass, the young growths must be thinned out when they appear in spring so as to allow of those left attaining to their full size. The paniced clusters of greenish white blossoms slightly drooping from the red leaf stems clothe the plant in early autumn, while later on the change of leaf robes it in amber. Even when the foliage falls its beauty is not yet over, for the tall wands of purple-red are still handsome and need not be cut down till the succeeding spring. This *Polygonum* was discovered by a Russian botanist named Maximowicz when exploring the island of Sachalien, which lies in the Sea of Okhotsk, between Siberia and Japan, from whence it was first brought to Russia about the year 1869. It is readily increased by root division in spring or autumn, and once planted no further care is necessary save to chop away the spreading rhizomes, as otherwise they would take entire possession of whatever spot of soil they may be in.

*Tropeolum speciosum* is in its pretty seed stage, those clustered seed-vessels of gem-like blue that make the plant still interesting when the flame of blossom has swept by. This *Tropeolum* is in full sunshine, but its root is safe and cool beneath, shaded by the thick branching *Cotoneaster* that climbs by the entrance steps of the dwelling-house. Through these branches the *Tropeolum* creeps in spring-time, and once free, flings its delicate stems across the deep green shrub, resting on which it flowers contentedly all through the summer days.

Since rain has fallen the Acers have made rapid growth, and when the sunbeams pass through the young leafage it shines with a burning light that is quite indescribable. During the dry weather they scarcely made any visible growth, but now the fresh shoots are most brilliant. Although these trees from Japan seem to revel in the sunshine, they also need much root moisture.

A bed has just been prepared in a sheltered spot for cuttings of all kinds, Pansies and hardy plants, and all sorts of flowering shrubs. Even if not needed for oneself, it is well to have an overflow for the friends that visit one's garden, and to be handed a plant with a root appears always a much greater gift than when one is merely given a slip or cutting. The giving away of plants seems ever to increase one's own. The plant that is divided appears to flourish better. The half that is left becomes more vigorous from having greater space and ceasing to be exhausted in its search for nourishment, so that giving is gain in the garden as well as elsewhere through life, and no lesson do the flowers more strongly teach us than that of "freely ye have received, freely give." Cuttings put in now root freely while the ground is still warm, and are ready to plant out in October or in the following spring.

In the rock garden *Sedum spectabile* has taken the place of the *Eryngium* now past in drawing to it a crowd of red admiral butterflies and large bumble bees, that rest intoxicated on its great bosses of rose-pink bloom. The charm of this *Sedum* lies in its thus gathering to itself the beautiful winged insect life around, which makes it so conspicuous in the sunny

autumn mornings. *Gazania splendens* is too seldom seen in our gardens, and yet it is a gorgeous blossom with rays of ruddy gold set in leaves of silvered lining. Sunshine it must have, as only then will it expand and show the inner circle of dark Argos eyes. Save in warm localities, it will not survive the winter, but cuttings taken now will form good plants for the following year. L. A. L.

(To be continued.)

## STOVE AND GREENHOUSE.

### CAMELLIAS UNHEALTHY.

B. C. MANSFIELD'S second letter explains what we surmised, that the border is at fault. Opposite extremes will both act injuriously to the plants. In your case it does not by your own showing proceed from dryness at the roots. The border is evidently in a bad state, if border it can be called. This is affecting the roots—the fact of the soil remaining "very wet and pasty for a long time after watering" would account for this. The way in which the plants were planted out in square holes was a mistake. They have never taken kindly to the soil outside of these holes, hence the roots are confined to a limited space—far worse than if starved at the roots in pots or tubs. The attempt to force them into flower so as to have a good quantity of bloom at Christmas cannot but end in failure whilst the present condition of things exists at the roots. In forcing *Camellias* the treatment should vary from what is accepted as the usual mode of procedure in forcing. To force the plants to expand their flowers is not congenial to them. What should be done is to hasten the growth as soon as it commences after flowering, continuing to give warmth until the new shoots and leaves are quite hardened. To give an example of flowering *Camellias* early, I will quote an instance which will give an idea of the correct treatment. The *Camellias* in question were planted out against the back wall of an early Peach house. Here they made and finished or ripened their growths early, flowering before and during Christmas-time whilst the house was still cool or before any heat was applied for the Peaches themselves. This illustrates the plan to adopt in as clear a manner as possible. The plants in question may make a fairly good growth. *Camellias* will do this and yet fail to flower satisfactorily. The best remedy will be to lift the plants carefully, saving all the healthy roots as far as possible, and then remove all of the soil in which they were planted, as well as that surrounding the holes. Then drain the border with broken rubble, old brick-bats, clinkers or potsherds, as the case may be, providing also by means of pipes an escape for the water. On the drainage place a layer of the coarsest peat and loam and make the border up with the same kind of soils in about equal parts with sand or road scrapings, but much rougher than in pot plants. Around the roots some finer soil may be needed, finishing off by making all firm. Then with one good watering at once and frequent syringings afterwards the plants should soon start into fresh growth.

SOUTHON.

*Luculia gratissima*.—This greenhouse shrub will grow freely enough in almost any situation provided the soil is free and the drainage good, but to get it to flower it must have a maximum amount of sun. Where this is deficient growth may be rampant, but the bloom trusses never develop. A sunny greenhouse or conservatory freely aired throughout the summer suits the plants well, enabling the growth to mature and the trusses to open in autumn. A compost consisting of good fibrous peat or three parts peat to one of loam with some opening material added suits the plants well, and when in full growth plenty of water must be given with a stimulant once a week.—J. C.

SIMPLER FLOWER GARDEN PLANS AND BEDS.

WHAT a vision opens out to anyone who really considers the design of the flower garden when he thinks of the curiosities and vexations in forms of beds in almost every land where a flower garden exists! The unfortunate gardener is the heir—to his great misfortune—of much useless complexity and frivolous design, born of applying conventional design to the ground. These designs come to us from a remote epoch, and the designing of gardens being from very early times in the hands of "artists" and decorators, the garden was subjected to their will, and

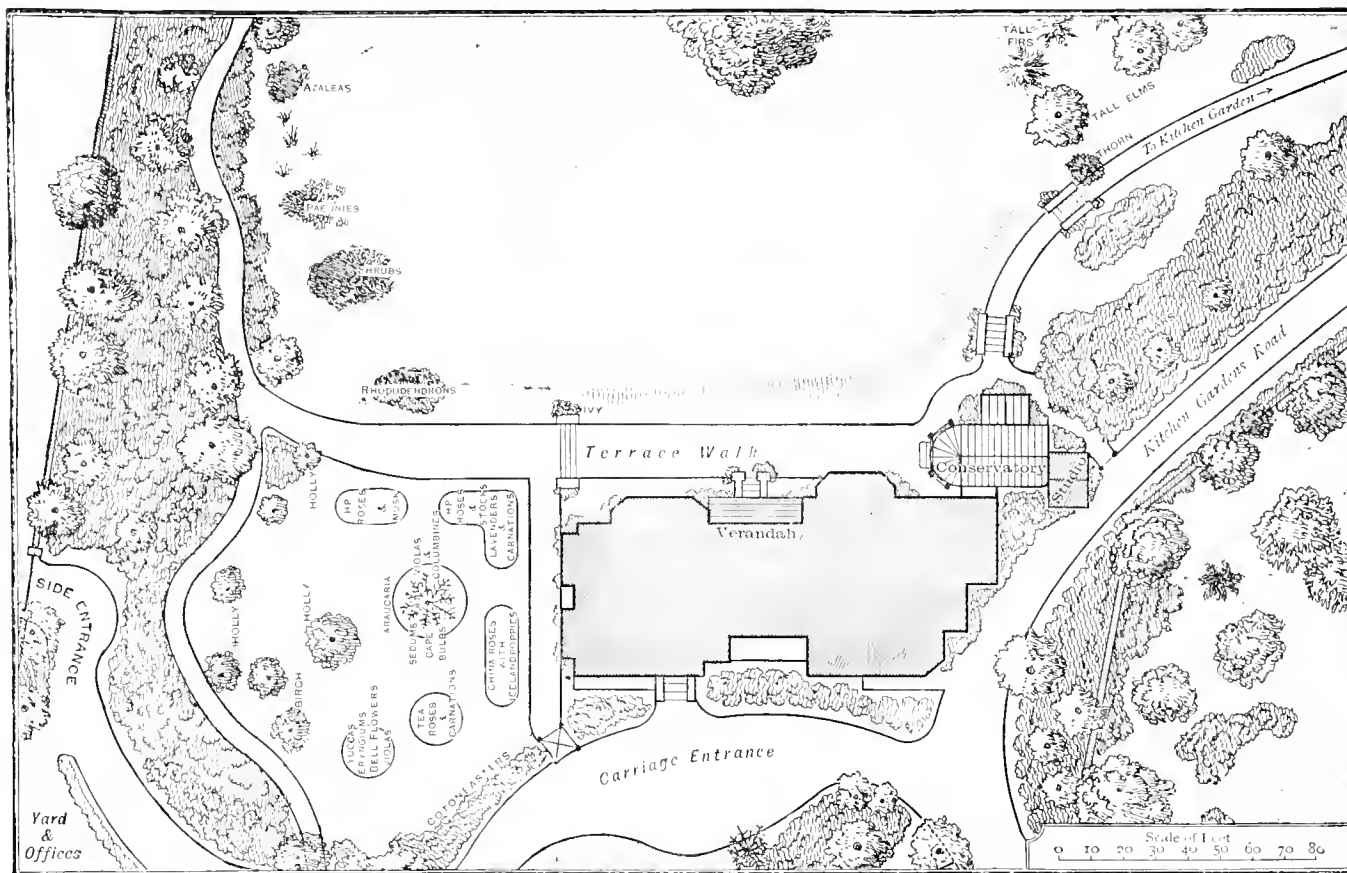
smaller, soon got out of order, and after a few years the whole thing was painful to see. And good gardeners were losing their time trying to plant paltry beds in almost every frivolous device known to the art of conventional "twirling."

Even where such extravagances as these were never attempted we see the evil of the same ideas, and in many gardens the idea of adapting the beds to the ground often never occurs to the designer. If the ground does not suit the plan, so much the worse for the ground and all who have to work on it.

By some people this objection on my part to conventional design is mistaken for an objection to formality itself altogether.

ground and to suit the ground. Our object should be to see the flowers and not the beds, so that while we have all the advantage of mass and depth of soil, and all the good a bed can give for convenience of working or excellence of growth, we take little pride in its form, and plant it so that we may see the picturesque effects of the plants and flowers and forget in the picture the form of the bed.

The relation of the beds to each other is worth considering, because, generally, it is much too complex and close and there is little freedom. Designs that were well enough for furniture or walls or panels applied to the garden gave us a new set of difficulties. Carried out in wood or in the carpet they answer



Garden at Golder's Hill. Flowers to left of house and towards margin of lawn, showing fine view over distant country. This plan (by R. Munnock) shows the error of supposing that the picturesque garden requires the walks to be "made crooked."

in our own days we have many times seen gardens laid out from the point of view of the "decorator," *i.e.*, beds without the slightest relation to garden use, difficult to plant and costly to keep in order. At South Kensington the elaborate tracery of sand and gravel, &c., there was attractive to some when first set out, but it soon turned to dust and ashes. It was, indeed, to a great extent formed of broken brickdust, in a vain attempt to get rid of the gardener and his flowers. The colours were supplied from the building sheds, where one saw boys pounding up bricks and slates, and little beds were made of silver sand, so that no gardener could disfigure them. The Box edgings margining beds a foot wide, or

Certainly there are bold spirits who do not mind putting their houses among rocks with the heather on them, but, generally speaking, we must cultivate a flower garden, and simplicity as to form of the beds should be the rule in it. There are many ways of growing flowers and all sorts of situations fit for them, but the flower garden itself near the house must often be laid out with regular beds, or else we cannot cultivate the flowers with convenience, or get about the ground with ease, and it is only a question of right and wrong formality. The beds in my own work are, as will be seen by the plans here given, as formal as any, but simpler and larger, and are made on the

their purpose, if we like them; but a flower bed is a thing for continual work, both in cultivating and in arranging and keeping it, and therefore it is best to see that we are not bothered by needless complexities in dealing with the ground. In these plans there is no difficulty of access, no small points to be cut in Grass or other material, no vexatious interruption to the workmen, but beds as airy and simple as possible and giving us much more room for flowers than beds of the ordinary type.

The three plans herewith given are those of wholly different kinds of gardens. The first, at Hampstead, is perhaps the most interesting example of a London garden for its disposition



as regards beauty, airiness, perfect repose, and fine distant view in which one can scarcely see a house, a result which it is novel to find so near London. This plan is also instructive in other ways—showing that where it is desirable to keep a lawn open and quiet for view, play or any other like reason, it is often easy to do this without interfering with the necessary flower gardening or any other charm of the place. The lawn is so open and airy, that any number of people may assemble on it without inconvenience or injury to anything. The lawn falls gently from the house, so that any walled terracing is needless, and, excepting a few steps for the convenience of level, little has been done in that direction. The plan also well disproves the

companions. At one end of the little garden is the gardener's house, and high walls surround the rest of the garden, so that there is shelter and every comfort for the plants. The garden is sensibly laid out to suit the ground, the plants—Roses and hardy flowers in great variety, a plan which admits of delightful effect in such walled gardens. Picturesque masses of Wistaria covered one side of the wall and part of the house, and the whole was a picture in the best sense. In such garden enclosures it would be difficult to find anything more delightful during more than half the year. A drawback in gardens of this sort in the old days was the absence of grouping or any attempt to hold "things together"—a fault which is easily got over. It is easy to

The third example consists of two flower gardens close to a Tudor house, with a garden door from the house into each. One being small (that on the south), it was thought better to devote it all to flowers and the necessary walks, all being done with a view to simplicity of culture and good effect of the plants. In the other garden, there being more space, the lawn is left open in the centre, while all round and convenient to the walk are simple, bold beds easy to deal with, and also spaced in a free and open way for people to get among them or about the lawn. The little south garden being much frequented in all weathers, and the paths among the beds rather small, it was thought best to pave them with old flagstones, and that has proved very satisfactory, because rolling and much weeding are thereby avoided and the walks are pleasant to walk or work on at all seasons. South of the house and these gardens there is an open, airy meadow lawn, the Grass of which is studded with many bulbs which flower in the spring. The vigorous kinds of spring bulbs are grown in great quantities in this field, and only the choicer and rarer early bulbs are put among the Roses and other flowers in the flower garden proper, which is mainly devoted to the more precious hardy flowers and to Tea Roses.

W. R.

THE ROCK GARDEN.

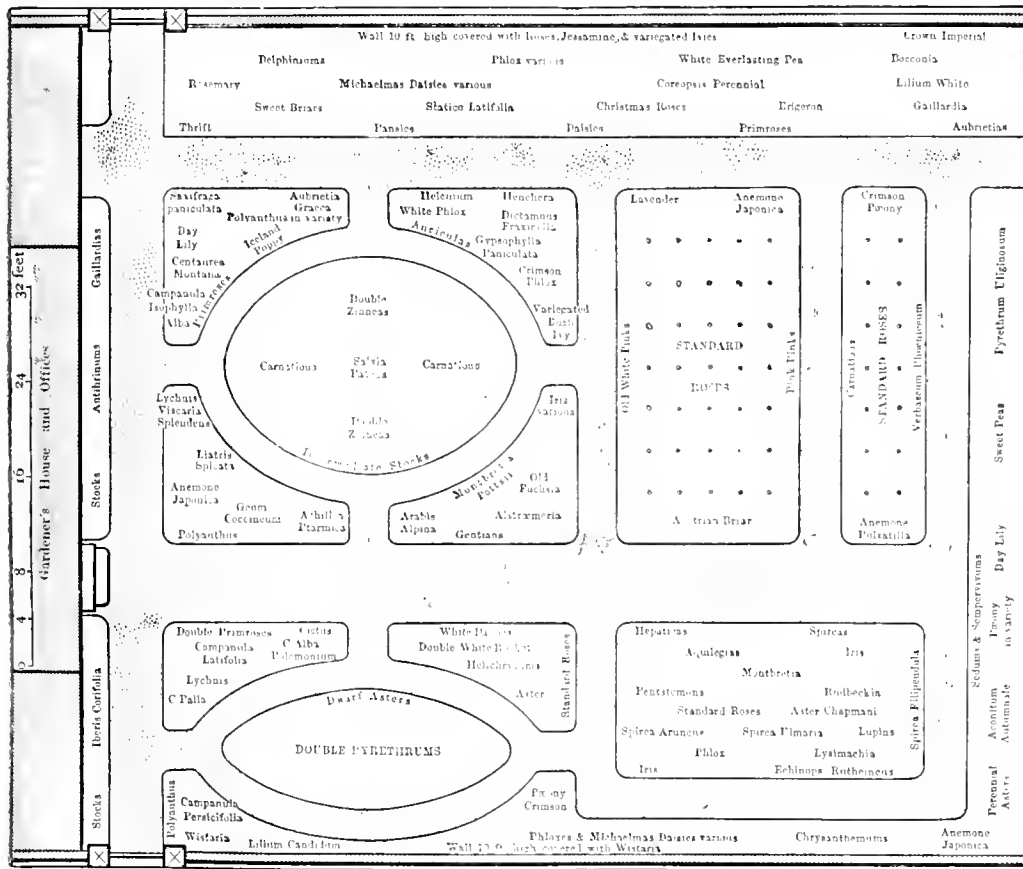
II.

JANUARY 26. — During the week just drawing to a close we have had a most miscellaneous assortment of weather samples in the west. It has been one continuous change from rain to sunshine, storm to calm, and frost to snow and sleet. In the rock garden, nevertheless, several fresh flowers have appeared, although we had 6" of frost and the ground is slightly sprinkled with snow. Three or four specimens of that charming rock plant *Morisia hypogea* have each of them several blooms expanded, though the plants were not sheltered or protected in the slightest degree. Nor is it the flowers alone that constitute so bright an ornament, but the glossy leaves greatly enhance the charm, and the effect of leaves and flowers peeping out from the snow at the present moment is particularly striking.\*

Slugs and snails seem to have acquired a special liking for *Morisia hypogea*, and I have known several instances where every vestige of the plant was to all appearance totally destroyed by their ravages. I found, however, that a fresh set of leaves would spring up from the roots even when the plant had long been considered as dead.

Another useful rock plant which has opened its flowers this week is *Arabis rosea*. This is at present about 4 inches to 6 inches high, and bears numerous rosy purple flowers. It is not so compact in its habit of growth as *Iberis stylosa*, which I mentioned last week, but spreads more after the style of *Arabis alba*.

\* Since writing the above the thermometer has fallen in Exeter to 20° of frost, and all alpine are buried in snow, which is frozen hard on the surface.



Sheltered little garden in front of gardener's house at Uffington House, Stamford, with simple beds of Roses and hardy flowers, the space enclosed in walls.

thoughtless assertion of certain writers that landscape gardeners always twist their walks about.\* It is seen here that nothing of the kind is done in this most picturesque garden. The flower beds are rather few and bold, and made large for the sake of ease of cultivation and breadth of effect.

The next plan is that of the gardener's house at Uffington, near Stamford, which I had the pleasure of seeing last autumn; it is an example of the older-fashioned garden not uncommon before nearly all gardens were cleared for the sake of the Perilla and its few

avoid scattering things one likes all over the beds at equal distances, and, without "squaring" them in any stupid way, to keep them rather more together in natural groups and colonies, where they are many times more effective to the eye, and in winter it is much easier to remember where they are. In this way, too, it is easy to give a somewhat distinct look to each part of the garden. Box edgings may be used in such a garden, and where they thrive and are well kept they are very pretty in effect, but always distinctly inferior to a stone edging because more troublesome, and also because the plants cannot fall over them as they can a rough edging of natural stone—the best of all edgings.

\* "Because Nature is assumed never to show straight lines, all paths are to be made crooked."—*The Formal Garden*.

which it somewhat resembles in general outline, but its leaves are of a brighter green and more deeply notched at the margin. The plant is probably too robust in its growth to associate with the dwarfest forms of alpine plants, but for a rocky border devoted to larger plants it should be just the thing, especially where earliness of flowering is a consideration.

Though the ground is covered with snow, an hour's sunshine has removed the snow from the plants themselves, and I noticed a particularly striking effect of a rock covered with *Sempervivum triste*. The stones and soil are white with snow, while the bold rosettes of this *Sempervivum*, with their dark bronzy red colour, stand out in bold relief, forming a delightful contrast. Particularly handsome, too, is at present the foliage of *Meeconopsis Wallichii*. It has a peculiarly shaggy appearance, owing to

Saxifrages I would mention *Saxifraga lantoskana superba* and *S. paradoxa* as being particularly ornamental at this season. *Saxifraga capillaris* also is very effective; its leaves are a bright green and very much resemble *Soldanella*.

Of *Androsace*, the Himalayan kinds (*A. lanuginosa* and *A. sarmentosa*) are not ornamental at this time of the year, and present an appearance so bare and shrivelled, that those unacquainted with the nature of these plants might consider them to be in a dying condition, but as soon as the warmer weather sets in they will quickly change their appearance. Very much more ornamental at this season, even though they are not yet blooming, are such compact growing gems as *Androsace helvetica*, *A. cylindrica*, *A. pyrenaica*, and *A. obtusifolia*. As these varieties are generally found growing side-

leaves, and is here at least quite hardy, the dark-leaved *Leiophyllum buxifolium* and the glaucous-leaved *Mesembryanthemum uncinatum*.

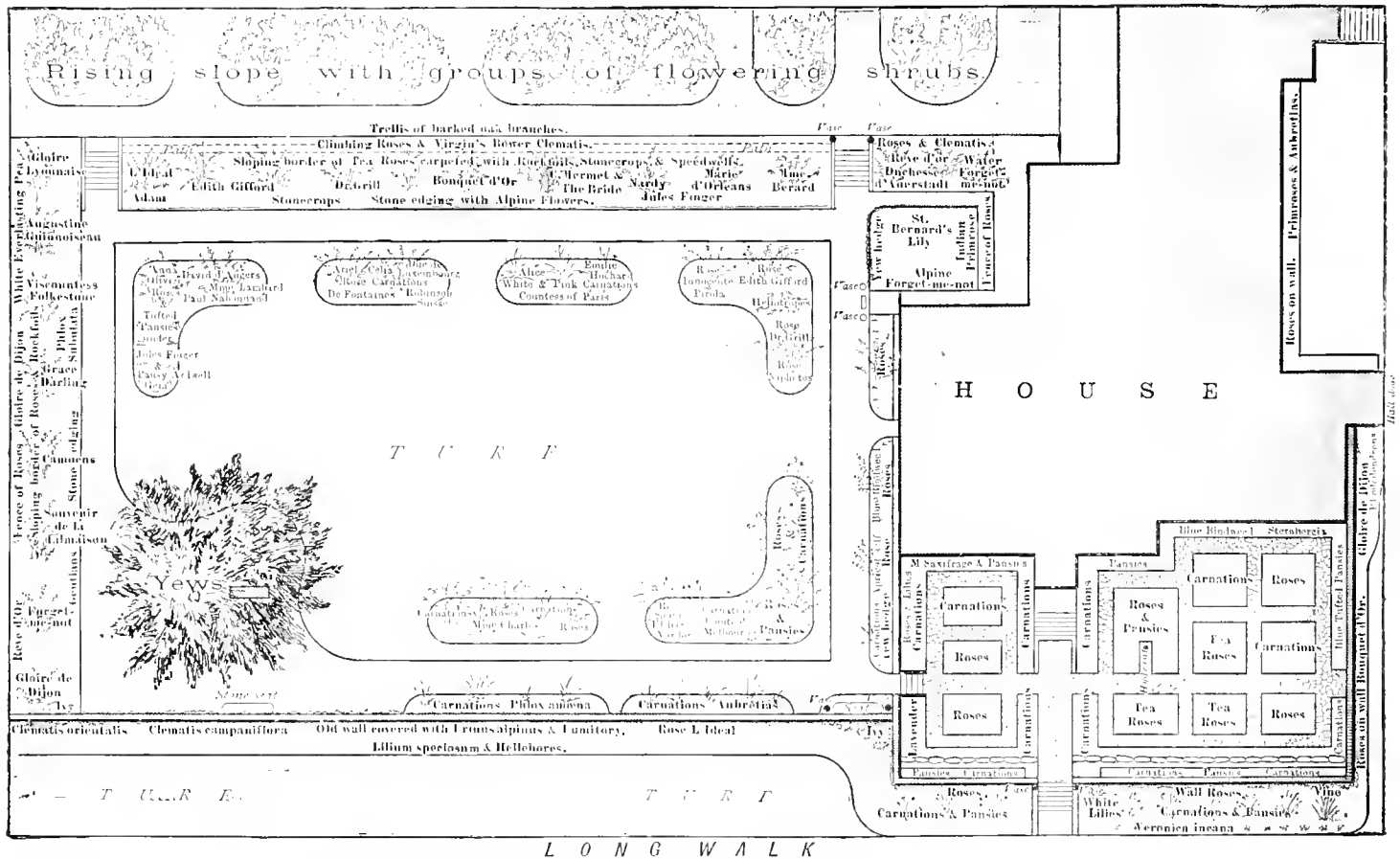
F. W. MEYER.

(To be continued.)

## CHRYSANTHEMUMS.

### BROAD-PETALLED JAPANESE CHRYSANTHEMUMS.

THE additions to this type of the Chrysanthemum are becoming numerous, and we are accustomed to read of new varieties like *E. Molyneux* or *Mrs. C. W. Wheeler*. They have wide, thick, leathery florets of varying length and are



Garden in Sussex designed to secure easy cultivation and good effect, and planted with choicest hardy flowers, as one way out of the "bedding" system.

the numerous long yellow hairs covering the stems of its leaves.

In my last contribution I mentioned several rock plants that might be used for winter effects on account of their handsome foliage, and to these I would like to add a few not previously mentioned. *Saxifraga cesia* is one of the minutest gems, and, like most Rockfoils of the encrusted section, its foliage appears even more white and silvery during winter than in the summer months, when new growth is being made. *S. cesia* planted sideways against a dark-coloured rock is very neat and effective. Its tiny rosettes are composed of leaves little bigger than a caraway seed, but they are packed so closely together as to form a minute hard cushion. *Saxifraga valdensis* also is exceptionally neat and compact and is very little larger than the former. Of larger kinds of encrusted

ways on the face of rocks, they require to be well drained during our winters. I noticed here in Exeter an *Androsace helvetica* which had been planted out three or four years ago, and developed into a very handsome specimen, but in spite of the sloping position it occupies in the rock garden, the excessive amount of wet during last November has caused in several of its stems an inclination to rot off. In this and other cases I find it a good remedy to shake a little gritty silver sand around the stems close to the rosettes of leaves, which frequently make new roots in consequence of such treatment. *Androsace carnea* looks now as bright a green as a mossy Saxifrage, and numerous flower buds are already visible.

Among other plants with ornamental foliage I will mention the pretty Pyrenean *Senecio leucophyllus*, which has almost pure white

mostly of an incurved form. Being capable of developing blossoms of huge dimensions, this class of flower finds much favour with those who exhibit for prizes. It is, however, a type which, with one or two exceptions, I do not favour, as coarseness is only too characteristic. Added to this is the fact that they are difficult of culture and not at all acceptable sorts for cultivating in a free manner without disbudding. When this mode is attempted the flowers produce a few rows of petals only, and they also exhibit large yellow centres, giving one the impression that they are neither good singles nor choice doubles. But the colours are exceedingly rich and the petals seem proof against decay, lasting a very long time in a fresh state. The earliest of this type, namely, the variety

*Edwin Molyneux*, was introduced from Japan nearly ten years ago. The introducer evidently

thought more of it than did most persons at that time in giving the sort a well-known name, but that the judgment was exceptional events have amply proved. The next year a bloom was grown which did not show the yellow disc. It was perfectly double and of huge size. I distinctly remember this blossom had the incurved shape, so that more of the old gold colour was visible than the deep rich red which makes this variety so showy. The following season, however, gave us the flower in its grandest garb, and all who saw the stand of half a dozen blooms that easily won the first prize at the great Aquarium show will not readily forget them. These blooms were 8 inches across and about 6 inches in depth. The wide petals were of great length and had a drooping habit, with just a slight curl at the tips to give them grace and show the yellow colour, which when set against the purple-crimson inner surface gives an exceptionally showy combination. Hot seasons suit this variety, for in some years (as, for instance, the last) good specimens were rare; but the autumn before (1893) it was again first, beating the best of the new introductions of that time, and when in good form it invariably finds more admirers than any sort yet to be found in collections. E. Molyneux requires a long season of growth. It is therefore advisable to strike the cuttings early. Use soil without manure of any kind and of a sandy nature in the first stages, it being an easy matter to produce a sickly yellow colour in the leaves. Its roots are thick and it takes a considerable time for the cuttings to form them, but when once a good start is made and the spring advancing, there is no Chrysanthemum that responds better to high culture. The aim should be continual repotting until the final size is reached. A 10-inch pot may be employed at that stage. I have succeeded best when the plants have been allowed to assume a natural growth, that is when the breaks have appeared without topping. The first stoppage to the shoots took place in April, and three shoots were selected. These in their turn were each allowed to show a crown bud, which occurred in July. After destroying the buds, one shoot to each stem was directed upwards and the next flower-buds retained, pinching away all side growths and pushing the plants' energies to the utmost by feeding with manures.

MRS. C. W. WHEELER.—This is pretty well known, but considering the time it has been in cultivation its appearances in good form are rare. The colour of the flower is an orange-brown shade, but the most remarkable characteristics of the variety are the universal width and thickness of the petals and its gigantic size. I cannot remember having seen a fine bloom of this grown in the neighbourhood of London. Country air is one of its requirements. It is well to strike the cuttings early and treat them as advised in the case of E. Molyneux in the young stage, but when the season is somewhat advanced this variety produces very strong growth and leaves. Large pots may be used in the final potting, and it is not easy to over-do this variety in the matter of fertilisers. Choose early buds. Those which form after the first natural break will not be too early even if they come during the end of July.

BEAUTY OF CASTLEWOOD.—When well grown this is a very fine flower, but it is only during hot seasons that we see it in good form. Perhaps the most difficult of all Chrysanthemums to form roots, it is one that has not, after several years' culture, found its way into many collections, and a number of persons have the variety Mrs. Wheeler named Beauty of Castlewood. There is, however, a great difference between the two. The latter has by far the richer colouring and is in every way the more striking. The inner surface is bright dark crimson and the outside bright gold. It inclines to an incurving shape. Full, broad, and deep when in good condition, it adds materially to the points of an exhibition stand. But its bad qualities are too many to allow it to ever become a favourite of the general cultivator. Difficult of culture up to midsummer and spare of root, it requires a deal of coaxing. An 8-inch

pot is large enough for this sort. Although a late variety, the buds may not be selected early. In such cases the blooms develop imperfect in shape and colour. The next of this type as regards time of introduction is

ROBERT McINNES. The colour of this variety is a showy orange-red shade with gold tips. On its own soil (America) it is held in great favour, but here it will never become popular. Two summers should be sufficient time to test a new kind, and in both seasons this sort has been unsatisfactory.

MISS ETHEL ADDISON.—This is an immense flower with broad thick petals, and the colour is rather a pretty shade of rose-purple. It is a strong and easy grower, but only useful for show purposes. Whilst the taste exists for Chrysanthemums of huge dimensions, kinds that have that quality and a heavy look will always find admirers, but for any other purpose except filling up a large space on show boards such kinds are useless.

DUKE OF YORK is another very popular exhibition variety, but it is coarse. Dull and uncertain in colour, with very little character in its formation, it has gigantic size. The inner shade of colour is rich and dark, but the thick wide florets incurve loosely and exhibit the outer surface, a washy grey. The plant is an excellent grower, and the sort may be made to produce blooms, perhaps not altogether repulsive, by late bud selection.

KING OF CHRYSANTHEMUMS is among the newest of the "Wheeler" class and has brilliant colouring. It is also a capital grower, and I fully expect another year's growth will bring out excellent qualities. This came from Japan.

The French raisers appear to have worked for this broad-petalled type, probably from the fact that the semi-double varieties like E. Molyneux and Mrs. Wheeler, when cultivated by ordinary methods, lend themselves to seed-bearing.

MRS. C. HARMAN-PAYNE belongs to the huge, coarse, dull-coloured section, and yet it is among the first dozen seen most often in exhibition stands. Apart from its size, however, there is nothing to recommend it unless it be that it is one of the easiest to grow. Select late buds and only allow three flowers to a plant. This treatment tends to bring it less coarse than generally seen.

PREFET ROBERT has a purple-rose colour, rather bright, and is massive in build. It is a good grower, but, apart from show purposes, not a commendable sort.

PRESIDENT ARMAND has rich dark crimson florets with silvery reverse. The flower is as refined as any of the broad petalled type, and if with further cultivation the richly coloured inner surface of the petals is more conspicuous than when first tried, this will prove an exceedingly handsome blossom. The habit of the plant is dwarf and its leaves thick and leathery.

VICE-PRESIDENT CALVAT.—This is perhaps the least refined of all Chrysanthemums and the strongest grower. The blooms are inclined to incurve and the colour is bronzy brown. Exhibitors will, I know, forget many faults if a flower has large size, but they never look at this kind. I grew the variety from the first and discarded it after one trial, but there are many persons still anxious to possess it. This again is of easy culture, its only good quality.

HENRY JACOTOT FILS may be included among this type. It is less coarse than many, and the formation of the incurving and intertwining florets is very taking. It has a dwarf habit of growth; the colours are crimson and gold.

M. DENNIS takes after the E. Molyneux style and is a rich and handsome flower. The florets are wide and long; they recurve and show the crimson inner surface. It is dwarf and requires high culture and a large pot, as well as early bud-selection.

H. SHOESMITH.

#### CHINESE PRIMULAS AT READING.

A VISIT to Messrs. Sutton and Sons' nursery at Reading is interesting at all seasons of the year. At the present time it is the Primulas and Cyclamens that are the leading features, combining, as they do, a floral display of the rarest excellence and beauty. The results achieved by the Messrs. Sutton in the hybridisation and selection of the best types of the Chinese Primula extend back over a long series of years, bearing evidence of the greatest possible painstaking on their part to bring their strain to the highest state of perfection. A visit at this season affords an objectionless in the improvement of florists' flowers as represented both by the Chinese Primula and the Cyclamen. It is only by an inspection, which is readily afforded, that the charming colours in such variety amongst the Primulas in question can be fully or adequately realised. These colours extend from the purest white to pink, from crimson to scarlet, and from purple to various shades of blue. Furthermore, there is this remarkable feature, viz., in nearly every shade of colour amongst the singles there is to be found its counterpart in the doubles.

One of the most noteworthy of the many good features in the Reading Primulas is the subdued leaf growth with short leaf-stalks. It should be borne in mind by all cultivators of the Primula that this plant is not grown, or at least should not be, for the sake of its foliage. Any practical grower will often have noted that this mistake is made, and if seed be saved from such plants the same features will be imparted to the offspring in a greater or less degree. We do not want plants with a dense and large leafy growth, but those in which the flower-spikes predominate. There are at Reading what are most fittingly termed Giant Primulas, to distinguish them from the other singles, but the use of this term does not mean that the leaf growth is of giant character; there is a robust vigour about the plants, it is true; they are stout and sturdy, but the flower-spikes and the individual blossoms are the chief features, these being of large size and unusual substance; hence the definition of "giant." Another and an all-important feature in this strain of Primulas is the variation of flowering in point of time. There are varieties for early or autumn use, others for the winter, and others, again, for the spring. In regard to this feature, it might be said by some critics that this variation is all brought about by sowing at different seasons, but it is not so; it is fixed in a most pronounced manner in the different varieties, all of which for purposes of seed-saving are sown at one time. The early kinds are going out of flower, others are just at their best, whilst the latest are only just commencing to flower. A variety, for instance, called Snowdrift is very early, coming into flower in September if needs be. Reading Pink has this same feature, whilst the latest of all are to be found amongst the giant section and the doubles, Giant Crimson and Double Red being two instances of this. At the recent January meeting of the R.H.S. Messrs. Sutton exhibited a few of their newer kinds, but the light was so indifferent that no correct idea could be formed of the colours. Seen in the span-roofed houses at Reading the difference in this respect is astonishing.

Of the giant section the following were particularly noteworthy: Giant Rosy Queen, with large flowers, the petals overlapping each other by reason of their breadth, the colour a soft rosy blush, singularly handsome and distinct, the well-defined eye adding to the effect; this is to be seen both in the Fern and plain or palmate leaf. Giant White.—This has the plain leaf, the growth being very sturdy and robust, the colour of the purest, whilst in point of size the flowers are amongst the largest of all and the spikes very robust. Giant Crimson was just unfolding its first flowers; this is a Chinese Primula of unusual excellence, having the same good properties of the Giant White in respect of the flowers, its name being most appropriate. Giant White (Fern-leaf) is a counterpart of the preceding Giant White except in regard to its foliage.

which is deeply cut and extremely handsome. Giant Brilliant Rose is a fitting companion to either of the foregoing, the colour a deep rose, becoming more intense with age, a grand decorative Primula. Giant Lilac is a very distinct and showy Primula, with singularly free growth, the flowers pale lilac-purple. Giant Pink has flowers of extraordinary size and exquisitely fringed, soft pink in colour, a most distinct and pleasing shade, being in all respects a model Primula of unusual beauty. Snowdrift, as its name indicates, is a white variety of the Fern-leaf section; its earliness has been already noted. Grenadier is quite a new shade of colour, a deep orange-scarlet, being extremely showy and of rich appearance. Rosy Queen (Fern-leaf) is of unusually dwarf growth, rosy blush in colour, a select decorative Primula. Reading Pink is the best type of a pink Primula, deep blush-pink, with paler shading; this also is an early variety and a fitting companion to Snowdrift. In Brilliant Rose is to be seen a specially fine Primula, deep in colour, extra dwarf and very free, with finely-formed flowers and large trusses. Gipsy Queen, a Fern-leaf, is the best representative of its section, with flowers of the purest white, the distinct yellow eye being very conspicuous; the leaves are suffused with a dark metallic hue, the leaf stalks being darker still. This contrast between flowers and foliage makes this a most attractive variety. Purity, another Fern-leaf, has flowers of snowy whiteness, with pale lemon eye, large in size and perfect in form, the petals so overlapping as to make the flowers look very massive. Of this there is also a plain leaf form. Pearl, which has been in commerce since 1879, still holds its own as a first-class white decorative Primula, very free and compact, with a profusion of spikes. Ruby King, another of the older varieties, has deep ruby shade, with a distinct crimson zone surrounding the eye, the growth being specially close, the flowers nestling on the foliage. Brilliant Ruby is a selection from Ruby King, and is one of the most brilliant in colour of any, being of a much richer shade than the foregoing, having its other good qualities. New Deep Carmine is a marked advance in this shade of colour, with extra fine flowers and stout trusses. This is a choice addition to late Primulas. Reading Blue is the most marked advance yet seen in this colour (the washy shade of a few years back being entirely dispelled), which is intermediate between a deep lavender-blue and that of the Forget-me-not, being quite unsurpassed at this season of the year as a decorative Primula; the growth is robust and dwarf. Of the foregoing there is also a Fern-leaf form which has even more richly coloured flowers, whilst the growth is decidedly attractive. Besides these there is a new blue Primula (not yet in commerce), quite unique in colouring, a pale soft pure blue, with the margins of the petals shading off and forming a white marginal edge, the flowers themselves of full size and the finest form, with foliage of a paler shade of green than usual.

The double Primulas at Reading are quite a feature of themselves, the advance during the past few years being marvellous. These are not appreciated nearly so much by some growers as they deserve to be. For cutting purposes, either to use at home or for sending away, they are of very great service, both lasting and travelling better than the singles. When better known these seedling doubles will beyond doubt be grown extensively. All the most serviceable colours are now represented in this section. Double White is a great stride with large trusses freely produced, whilst the growth is quite close, the spikes showing well above the foliage. Double Scarlet is of similarly good habit, with the flowers of an intense scarlet, the spikes produced in profusion; this is a grand decorative Primula. Double Imperial Purple, the plants of which are very dwarf and compact, produces flowers of an intensely rich shade, a splendid colour for effect and excellent also as a late variety. Double Red is a large and showy variety of free growth, being well suited to cool houses. Improved Double Carmine is valuable not only in its colour, but also as being one of the earliest of the doubles.

Double Rose has flowers of a soft rosy-blush shade, a charming colour, the individual blossoms being very full, the foliage of small size. Double Carnation-flaked is for vigour of growth, sturdy habit and profusion of flower a variety of the first rank, the flowers being pure white, with faint flakes whilst young, but which intensify with age; the trusses are of extra size. Double Blue in point of colour is equal to Reading Blue, but as a double it possesses the finest flowers of any, being a most noteworthy variety in every sense. Double Heliotrope is a counterpart of Double Blue save in colour, which is of the true heliotrope shade often so much in request, a singularly distinct variety. Double alba magnifica and Double White Fern-leaf are two distinct additions, both being choice varieties. Each of these varieties of the Chinese Primula is in groups; hence a comparison is rendered all the more easy, whilst the effect is also enhanced.

## SOCIETIES AND EXHIBITIONS.

### ROYAL HORTICULTURAL SOCIETY.

FEBRUARY 12.

THIS meeting afforded abundant evidence of the severity of the weather, for on no previous occasion do we recollect such a small number of exhibits. Singular to say, however, Orchids were by far the most numerous, and these alone amply compensated for a journey in the inclement weather. It was not so much as plants but as cut flowers that these were exhibited; this is no cause for surprise, and only in a few instances had any of these cut exhibits come to any harm in transit. The labours of both the floral and fruit and vegetable committees were exceedingly light, the only recognition to a new production being made to a seedling Anthurium. The exhibit of Oranges, home grown examples, from Sawbridgeworth was remarkably fine, the fruits well ripened and possessing a very rich aroma. Another exhibit of Seville Oranges came from Derby; these were unusually large and well suited for marmalade after they had done good service as ornamental productions.

#### Orchid Committee.

First-class certificates were awarded to the three following fine Orchids, all coming from well-known collections:—

*CYMBIDIUM EBURNEO-LOWIANUM SUPERBUM* (C. eburneum × C. lowianum).—A grand hybrid, being very distinct from the type, quite as large in the flower as C. lowianum with much of its form, the growth being on the other hand quite intermediate in character. The sepals and petals are of creamy-yellow shade, the lip having the rich dark crimson markings as seen only in the best forms of C. lowianum. From Messrs. James Veitch and Sons, Chelsea.

*PHALENOPSIS YOUNGIANA*.—An imported species, but one in all probability that is nearly related to P. Aphrodite, P. Schilleriana, and P. Stuartiana. In size, vigour, and form it is like P. Aphrodite, the upper sepal and petals being white with the roseate suffusion (more particularly in the petals, which are very broad) as seen in P. Schilleriana, with the lower sepals spotted as in P. Stuartiana. A very superb variety with a combination of good qualities. From Baron Schroeder's collection at The Dell, Egham.

*PHALENOPSIS INTERMEDIA PORTEI*, of which a grand spike with five branches and thirty-six flowers and buds was shown, was not only a fine cultural exhibit, but also a superior form of intermediate, with flowers 2 inches across; sepals and petals pure white with a faint suffusion of rosy lilac at the base and deeper lilac on the column, the lip being more of a reddish tinge. From Lord Rothschild's collection, Tring.

An award of merit went to—

*CALANTHE MASUCA TRICARINATA*.—A new garden hybrid with the foliage and habit of C. masuca,

but dwarfier, the formation of the spike being similar, with the labellum of each individual flower considerably shorter; the colour is a very pale flesh with the faintest tinge of pale lilac. From Messrs. J. Veitch and Sons.

A silver Banksian medal was awarded to Baron Schroeder for some exceedingly handsome and choice cut flowers brought by Mr. Ballantine from The Dell gardens. These comprised the Phalenopsis to which note has already been made, also *Odontoglossum coronarium* miniatum, of which a huge dense spike was shown with large flowers of an intensely rich shade of crimson-brown. On this spike there were twenty-seven blooms and buds, and a cultural commendation was most deservedly awarded. Another most noteworthy spike was that of *Calanthe* Baron Schroeder, very vigorous, of great length and carrying a fine cluster of flowers, these being of an intensely dark purplish crimson, the shade slightly lighter upon the sepals and petals. *Calanthe Regneri* was represented by a very fine spike densely set with bloom; the pure white sepals and petals, also lip, with the throat and column of rosy purple, make this a most noteworthy species. C. Regneri Stevensiana has the rosy suffusion extended to the sepals and petals, being also of a lighter shade, the spike being again a fine one. Another form appeared to be quite intermediate between these two. C. Regneri fausta has the lip entirely tinted with a dark shade of rose, whilst the sepals and petals are of a lighter tint. *Phaio-Calanthe Sedeni* and its var. *rosea* were both represented by good spikes. Several *Cypripediums* were also shown, comprising the choicest kinds, as C. insigne Sandere, the unique character of which is well known, the golden, the pale green, and the pure white being in pleasing harmony. Quite in contrast to this variety was C. *Harrisianum superbum*, with flowers of the deepest bronzy purple and very lustrous (this struck us as a distinctly superior form). C. Lathamii, with its golden and bronzy tinted flowers of large size, C. Charlesworthii, of which one of the best varieties was shown, C. Sallieri-Hyeatum, a distinct and richly marked variety, and C. Calypso, somewhat after C. Lathamii, were also included, as well as another variety bearing some resemblance to C. Boxalli, but much superior to it.

Sir Trevor Lawrence sent from the Burford Lodge collection another grand spike of *Odontoglossum coronarium* miniatum, scarcely so strong as Baron Schroeder's, with a few less flowers, but in other respects equally as fine; to this also a cultural commendation was awarded. From Mr. F. Wigan's collection at Clare Lawn, East Sheen, came *Cypripedium Rothschildianum*, one spike of which bore three extra fine flowers, well marked, with the lower sepal of unusually large size, and the petals longer than usual; C. Lathamii was represented by a large well-formed flower of rich colour; *Lalia pumila* prestans by a fine form with broad petals, and the labellum of deep velvety purple; and *Vanda* (Stauropsis) *gigantea* by a good spike of thirteen flowers and buds, the sepals and petals of which are of leathery substance, rich yellow in colour, with orange spots. From Messrs. Sander and Co., St. Albans, came *Prescottia colorans*, an erect spike, flowers yellow and quite minute; also *Dendrobium Egertonii*, an old, but seldom seen species, very beautiful if not showy; *Odontoglossum Humeanum*, in the way of but quite distinct from O. Rossi majus; *Phaius amabilis* (P. grandiflora × P. tuberculosis), with the lip after the last-named parent and the sepals and petals of a clouded pink; also P. Martha (P. Blumei × P. tuberculosis), the lip again taking after the last named, but with the sepals and petals of a light golden yellow. *Dendrobium Phalenopsis Statterianum*, the forerunner of Schroederianum, was also staged, its rosy purple flowers being very beautiful. *Lalia anceps* Schroederiana, one of the very finest of the white anceps, was included, the flowers being of large size and of the purest white, save the vinous purple and golden markings in the throat. A fine spike of *Odontoglossum Coradinei albicansense*, with straw-

coloured flowers spotted with pale chocolate, and *Cypripedium Fordianum*, showing its affinity to *C. Stonei* in its dorsal sepal and in the petals, were also included.

Mr. Frederick Hardy, Ashton-on-Mersey, sent a few choice cut blooms, notably of *Cattleya Percivaliana* *magnifica*, just expanded, very superior, with larger and more richly coloured flowers, the lip being of a deep crimson purple. Other forms of the same species were shown, both light and dark kinds being included, in some of which the rich golden markings of the throat were very prominent. *Cattleya Trianae* was represented by several fine forms, the flowers of large size. *Dendrobium Schneiderianum* × *Phalaenopsis Schilleriana* and *P. Stuartiana* were also included here. From Mr. Cobb, Dulcote, Tunbridge Wells, came *Odontoglossum crispum* La Gascogne, with large, well-marked flowers, the sepals and petals pure white, quite devoid of the rosy-purple suffusion, but clearly marked with pale chocolate; the spike bore fourteen flowers. Mr. Hill brought from Tring Park a very fine spike of the old, but choice *Lælia superbiens*, a distinct and handsome species. Mr. Walter C. Walker, Percy Lodge, Winchmore Hill, sent two spikes of the exceedingly showy *Lælia harpophylla*, with its orange-scarlet flowers well developed; also *Oncidium splendidum*, somewhat in the way of *O. tigrinum*, the canary-yellow lip being very conspicuous. That noble hybrid, *Cypripedium grande*, was also shown here, the two flowers on the one spike being of deeper colour than usual. *C. Rothschildianum* was also included, as well as the old *Oncidium Cavendishi* and *Odontoglossum maculatum*, of which two spikes were sent. Mr. W. Thompson, Walton Grange, Stone, sent *Lælia anceps* in variety, also *Cattleya Trianae* and *C. Trianae alba*, with *Odontoglossums*, but the cold had been too much for them. Sufficient, however, could be seen to prove them to be good varieties in each case. Messrs. W. L. Lewis and Co., Southgate, had *Cattleya Trianae* *Ashtoni*, distinct, with a deep violet-crimson lip. From Mr. F. Burton, Highfields, Gainsborough, came hybrid *Cypripediums*, *C. suffusum*, *C. refulgens* and *C. maculosum*, the latter being the most distinct with its singularly spotted petals.

A silver Banksian medal was most deservedly awarded to Mr. Chapman, the Gardens, Cambridge Lodge, Camberwell, for what was one of the most interesting features of the meeting, viz., an excellent assortment of dried Orchid blooms, in which the splendid preservation of the colours was most noteworthy, combined with careful mounting. These comprised a wide assortment of species from various genera, some of the best being *Cattleya aurea chrysotoxa* and *C. Trianae*, *Cypripedium Youngi superbum* and *C. Leeanum*, *Dendrobium Wardianum*, *Celogyne speciosa*, *Lælia anceps*, and *Oncidium tigrinum*. Another medal (bronze) was awarded to an exhibit of photographs and photogravures of Orchid plants and blooms, which showed a high degree of skill in execution, being clearly delineated, the light and shade correct, the only fault to be found being a perceptible increase in size over the natural specimens. These came from Mons. Gravy, 164, Camberwell New Road, S.E.

**Floral Committee.**

An award of merit went to—

**ANTHRICUM PERFECTION**, one of the large-spined forms resulting from the influence, direct or otherwise, of *A. Andreanum*. This hybrid is a particularly fine one, with a large, well-proportioned spathe measuring 8 inches in length and 5½ inches in width, the colour a deep lustrous orange-red, the surface slightly uneven, the spadix being ivory white, and the foliage sagittate and deep green in colour. From Sir Trevor Lawrence.

By far the most noteworthy feature, however, presented before the floral committee was the splendid exhibit from Messrs. J. Veitch and Sons of their unique hybrid *Rhododendrons* of the *Javanico-jasminiflorum* and multicolor parentage. Of these, two boxes of cut blooms were shown,

each comprising a wide range of colour, from the purest white to the deepest yellow, the softest pink to the deepest red. The trusses of many of the first-named hybrids were unusually large, notably *No Plus Ultra* and *Conqueror*; of the latter section, Mrs. Heal was shown in its best form.

Sir Trevor Lawrence sent a well-flowered example of *Thyracanthus rutilans* with numbers of its racemes of vividly coloured flowers. This plant is not nearly enough grown. Messrs. Paul and Son had cut examples of *Azalea mollis* in various colours from home-grown plants, quite good enough for any purpose. From Messrs. Sander and Co. came *Hemanthus Kalbreyeri*, of which five large spikes of its deep blood-red flowers were shown; it is a superior decorative plant. Sir David Evans, Ewell Grove, sent a seedling *Primula* with pure white flowers of large size and well fringed; the excessive vigour, however, of the foliage was out of all proportion. This is a point in *Primula* culture that should be taken more note of.

**Fruit Committee.**

There were only a few exhibits before this committee. Messrs. Rivers and Son staged a dozen kinds of splendidly grown Oranges and Citrons, showing how well these fruits can be grown in this country with little heat. Most of the varieties staged had very fine deep green leaves, showing the robust condition to which these plants attain at Sawbridgeworth. The most noticeable varieties were the following: The White Orange, a very distinct kind with striped fruit, large, pale flesh and rind, the flavour being rich and good; the better-known St. Michael, the ordinary Orange of commerce, but splendid examples of culture, were also staged. Bettencourt, a nice looking fruit; Silver, or Plata, a splendid fruit, pale yellow, with very thin rind, flavour piquant and delicious; the Oval or Egg Orange of St. Michael, a large fruit with thick rind, but not equal as regards flavour to those named, may also be mentioned. The Maltese, a pretty fruit, with darker flesh, large, and very rich flavour, often varies much in colour, but is a free grower. A silver-gilt Knightian was awarded this collection. Five dishes of Seville Oranges were sent from Stanton Hall, Bakewell, Derbyshire, and were noticeable for their good quality and bright appearance. This variety is not only useful for its fruit, but bears a fine large flower (silver medal). Messrs. J. Peed and Sons, Norwood Road Nurseries, S.E., staged twenty-four dishes of well-kept Apples, the best varieties being *Annie Elizabeth*, *Winter Greening*, *Bismarek*, *Gascogne's Scarlet*, *Lane's Prince Albert*, the newer *Newton Wonder*, *Bramley's Seedling*, and others. Mr. A. G. Nichols, the Gardens, Nuneham Park, Abingdon, sent three dishes of Nichols' Favourite Keeping Onion for certificate. The bulbs were very good, and a cultural commendation was awarded. It was suggested that this kind be sent to Chiswick for trial.

**Annual Meeting.**

The meeting was held at the offices of the society, 117, Victoria Street, Sir Trevor Lawrence, Bart., the president, in the chair. The report of the council for the year was read by the assistant secretary, Mr. Weathers, and passed.

Sir Trevor Lawrence complimented the society upon the work of the past year, specially referring to the Temple show, which is now universally acknowledged to be the leading horticultural exhibition of this country. Last year it was superior in every way to its predecessors. He said the best thanks of the society were due to all who so kindly contributed to the success of this show. The council feared the extra day would have been a drawback to exhibitors, but they had been generous. A three-days' show was arranged for this year, and Sir Trevor Lawrence said that he might say they all looked forward to it. The regular meetings at the Drill Hall had been a great success, and the society was much indebted to those who had sent plants and flowers, and

also to the readers of papers. The great show of fruit at the Crystal Palace was also a success, and their best thanks were due to those gentlemen who subscribed the guarantee fund before the council embarked on the undertaking. This year the council had made arrangements with the directors of the Crystal Palace for a similar show. Good work had been done at Chiswick in the way of trials of vegetables and flowers, and their thanks were due to Mr. Barron, the superintendent. The tree and shrub conference at Chiswick was not well attended, no doubt owing to the bad weather. It was determined not to hold another conference this year in the gardens. Considerable repairs have been carried out at Chiswick during the past year, about £280 having been spent in all. At the last annual meeting a wish was expressed that a catalogue of the library should be published. A fund to meet the expense was opened, and £80 had been received up to the present time, but they required more. He was glad to say the work was well advanced. They had gone into the difficult question of judging at shows, and he hoped some settlement of the matter would be arrived at. The chairman spoke in the warmest terms of the work of the able secretary, the Rev. W. Wilks, also the assistant secretary, Mr. Weathers. Allusion was also made to the examination to take place in May in the principles of horticulture.

Mr. Johnston asked if the lectures could not be printed earlier in the journal. He suggested that the journal should be printed quarterly, as there was now a lot of matter of little interest. He also asked that a full report of lectures should appear, as the horticultural papers did not report fully; also that surplus seeds and plants be given the Fellows.

Mr. Parker inquired about the certificates given by the society. He said people were at a loss to know their value. He asked that the matter be looked into, as he wished to know the difference between the first class certificate and award of merit.

Mr. Marshall hoped the conferences at Chiswick would not be done away with, as they had done a good work. The houses and buildings had been put in repair and the various trials of plants, fruits and flowers were thoroughly carried out, so that the Fellows would be more interested in visiting the gardens in the future.

The chairman, in reply, stated it was not possible to distribute seeds in the way Mr. Johnston suggested, as it would not be fair to the trade, and the advertisements in the journal were a source of income that the society could not get rid of; also that the section of journal not yet printed would be published shortly.

Mr. H. J. Veitch proposed a vote of thanks to the chairman, which was carried unanimously.

Sir Trevor Lawrence was elected president, Mr. Sydney Courtauld, Mr. H. Williams and Mr. Thomas Statter as the new members of council, the Rev. W. Wilks re-elected secretary, with Messrs. H. Turner, A. H. Pearson and James H. Veitch auditors.

**THE ROYAL GARDENERS' ORPHAN FUND.**

THE annual meeting and election of children took place at the Cannon Street Hotel on the 8th inst., Mr. John Harrison, of Leicester, presiding, the officers and the committee being well represented, but of the subscribers only a few were present. The report of the executive committee set forth that notwithstanding the existing commercial depression, which affects all that pertains to gardening pursuits and the cultivation of the soil, yet success had followed their efforts, and, as far as the orphan fund is concerned, the tide of charity and benevolence flows on as freely as ever. The financial statement shows receipts higher than in 1893, while the ordinary working expenses remain about the same. During the past year sixty-one orphan children enjoyed the benefits of the fund at a cost of £787 10s. The committee recommend the election of six that day, bringing the number beneficiaries for 1895 to sixty-

four. There were thirteen applicants for election, and the committee regretted that several deserving cases had to stand over until next year. The report drew the attention of gardeners to the excellence and importance of the charity, and solicited from them more help and assistance, as the whole object of the fund is for their exclusive benefit, and an increase of assistance from the profession is urgently needed. Mention is made of the support rendered by local secretaries, and in the way of special contributions the Altrincham Gardeners' Society deserve a warm tribute of thanks; they sent a donation of £50 10s., the proceeds of a concert given on behalf of the fund. The report set forth that Mr. Harry J. Veitch had consented to preside at the next festival dinner, to take place on April 5. The cash statement showed the amount of receipts for the year ending December 31 to be £1601 0s. 3d.; subscriptions amounting to £435 16s., donations to £291 19s., the proceeds of the annual dinner, £620 19s. 3d.; the card collection brought only £27 6s. 11d., a most melancholy result, and dividends on stock, £189 9s. 9d. During the year stock had been purchased to the amount of £511 18s. 6d., bringing the investments up to £7570 6s. 10d., the balance carried forward being £829 13s. 7d. The chairman moved the adoption of the report and cash statements, characterising them as decidedly satisfactory, at the same time exhorting the gardening profession to give a greater support to what is their own fund. This was seconded by Mr. William Marshall and carried unanimously. Mr. T. B. Haywood was thanked for his services and re-elected treasurer. Mr. John Fraser was re-elected and Mr. Martin Rowan elected auditor in the place of Mr. Sharp, resigned. Messrs. Asbee, Ballantine, Cannell, Cummins, Gordon, Roupell, and Wynne were re-elected members of the committee, and Messrs. H. B. May, H. J. Jones, and J. McLeod were elected members in the place of Messrs. Bunyard, Lane and Wright, who had resigned. Mr. A. F. Barron was re-elected hon. secretary, and an amendment was made to Rule 4, relating to the re-election of members of the committee, it requiring that in the future they attend three meetings in the course of the year to qualify them for re-election. Messrs. R. Dean, A. Outram, W. Poupert, and B. Wynne were appointed scrutineers of the election, and the meeting adjourned till 4 o'clock to receive their report. On re-assembling the scrutineers reported that the election has resulted as follows: For Rosa Emily King Ward, 535 votes; Frederick Smith Parker, 517; Isabella Elizabeth Pratt, 489; Alfred Alexander Crafter, 457; Leonard Taylor, 276; and Felicia Barber, 228; A. B. Ritchie, 216; S. Small, 209; Amy Farrant, 190; F. L. Haycock, 145; R. C. Stevens, 90; and F. Barson, 42. The chairman then declared the six first-named candidates duly elected. Votes of thanks were passed to the scrutineers and to the chairman for presiding, which brought the proceedings to a close.

## NOTES OF THE WEEK.

**Iris persica.** This charming little flower is amongst the most beautiful now in the greenhouse, and it is much admired. We usually pot it up with the other bulbs and bring it gently along in a cool house after the plunging process.—W. A. Cook, *Compton Bassett, Wilts.*

**Water Lilies and the frost.**—Mons. Latour-Marliac writes, saying that although they have not been spared the severity of this remarkably snowy winter, they have not to regret the loss of all plants through it, and his beautiful collection of Water Lilies is peacefully awaiting the end of all the tempests to open their leaves and buds to the sun.

**The frost.**—Since sending my previous note on the excessive frost, our register has been: Friday (8th) morning, 39°; Saturday (9th), 28°; Sunday (10th), 26°; Monday (11th), 13°. The barometer has fallen slightly and the sky looks gloomy to-

day, but a cold and rising breeze is coming from the E.N.E.—J. C. TALLACK.

**Eucalyptus globulus.**—I herewith send you a branch of *Eucalyptus globulus*, or Blue Gum. I thought perhaps it might be of interest to you or your numerous readers. The plant was grown in an 8-inch pot. I have noticed that many more flowered last season than for some years past.—J. LEE, *Gopsall Hall Gardens, Atherstone, Warwick.*

\*\* A very fine shoot of this *Eucalyptus* smothered with seed-pods.—ED.

**The yellow Aconite at Alton.**—What wonderfully hardy little fellows yellow Aconites are! Mine began to bloom December 21. Since then they have gone through some of the coldest weather since 1838, thermometer down to 1°, *i.e.*, 31° of frost, and only sheltered by barely an inch of snow; and to day, with the thermometer at 25° at mid-day, they look fresh and bright and are opening to a faint gleam of sunshine.—WM. WICKHAM, *Binsted-Wyke, Alton, Hants.*

**The new post-card and the Continental post-offices.**—Since people have been allowed in England to use post-cards of their own with an adhesive stamp affixed, large numbers of them furnished with a penny stamp have found their way over here. Now if the words "Post Card. The address only to be written on this side," are printed on the address side, our post-office authorities will pass them, but if not, they are treated as insufficiently prepaid letters, and a fine of 3d. is inflicted. It is hardly necessary to say that this is a great annoyance and loss to firms who have a large correspondence with Great Britain.—ERNEST BENARY, *Erfurt.*

**Dried plants from Eastern Asia.**—At the Linnean Society recently, Mr. W. Botting Hensley exhibited dried specimens from the Kew Herbarium of a number of plants from Eastern Asia, several of which are of a highly ornamental character; and from his remarks thereon there is no doubt that Western China will yet yield a rich harvest of hardy and half-hardy plants, equalling if not surpassing those already in our gardens from China and Japan. The best thing of all, perhaps, was a new *Jasminum* from Yunnan, sent by Mr. W. Hancock. It is closely allied to *J. nudiflorum*, but it has primrose-yellow flowers  $1\frac{1}{2}$  inches in diameter. Among other pretty plants were two new *Gesnerads*, of which there are many lovely Chinese members only known in a dried state in this country.

**The proposed national vegetable exhibition.**—A meeting of the general committee took place at the Royal Aquarium, Westminster, on the 12th inst., Mr. H. Briscoe-Ironside in the chair, and after receiving a statement from Mr. E. Molyneux, the hon. secretary *pro tem.*, in reference to the amount of support promised by members of the trade and others, and a full discussion had taken place thereon, it was resolved: "That as the prospect of holding a national vegetable show at the Royal Aquarium is by no means of an assuring character, the carrying out of such an exhibition in September next be postponed to another year." Votes of thanks were passed to Mr. E. Molyneux for his services as secretary, he promising to retain this office until some definite arrangement was come to: to the Royal Aquarium Society for permitting the committee to meet in that building, and to Mr. H. B. Ironside for presiding.

**The late W. Baxter.**—A curiously interesting item occurred for sale at Sotheby's auction rooms on Friday last, when a selected portion of the library of the well-known antiquary, the late Mr. William Kelly, F.S.A., &c., was dispersed. The item to which we refer was a folio manuscript volume of over 400 pages, and dealt with plant lore, customs, superstitions, &c., relating to the floral world generally, collected chiefly by the late William Baxter (of whom there is a portrait inserted), with additions by Mr. Kelly himself. The volume shows very wide acquaintance with both classic and comparatively modern writers,

and the volume is a monument of painstaking industry. That it should have remained unpublished is not surprising, for publishers have learned from expensively purchased experience that books of this kind do not pay. Even the volume itself—the work of many scores of hours—was only valued at £3 2s. 6d., at which price it passed into the hands of Mr. Quaritch, the bookseller.—W. ROBERTS.

**Severe weather in South-East Durham.**—I beg to send you a few notes on the severity of the weather as experienced here from the 6th inst. up to and including this morning, the 13th, and the different temperatures taken during that time, thinking the same may be of interest, and that you would like to publish them: 6th, 24° of frost; 7th, 22°; 8th, 45°; 9th, 32°; 10th, 40°; 11th, 28°; 12th, 20°; 13th, 31°. These temperatures have been taken in an exposed situation with the thermometers on a board close to the snow line. In two other positions in the gardens quite apart from each other and very much sheltered, with the thermometers 4 feet from the ground, the readings have been just 5° above these figures. These readings are taken from Negretti and Zambra's minimum thermometers. This is the greatest frost I have ever known, and I am inclined to think that present appearances warrant its continuation. It is rather more than six weeks since the severe weather commenced here, *viz.*, December 31, since which time the ground has been covered with snow, and at present, though none has fallen for a little over a week, it is 7 inches deep.—H. E. GRIBBLE, *Wynyard Park Gardens, Stockton-on-Tees.*

**The weather in West Herts.**—The past week has been the coldest of the present winter. During the seven days ending the 11th the highest day temperatures have been even colder than what the lowest night readings would be in an average February, while on four successive nights, temperatures below zero were registered by the exposed thermometer. The present frost has now (Wednesday) lasted without a break for twenty-three days, and for the last seventeen days the ground has been covered with snow to the mean depth of from  $1\frac{1}{2}$  inches to  $3\frac{1}{2}$  inches. The lowest readings have been as follow:—

	In Thermo- meter Screen.	On Snow.	Number of hours Air Temp. remained at or about its lowest point.
Feb. 6	22 of frost	33° of frost	5 hours
" 7	24 " "	34 " "	6 " "
" 8	24 " "	33 " "	5 " "
" 9	23 " "	33 " "	30 minutes

These are all lower temperatures than any previously recorded here in February. The frost has now penetrated the ground to the depth of 19 inches, and but for the covering of snow would have descended still deeper. Owing to the power now exerted by the sun and the clearness of the atmosphere, the temperature rises rapidly during the daytime. Indeed, on the 11th inst. my solar radiation thermometer (black bulb in vacuo) at 4 feet above ground rose to 103° during the sunniest part of the day. During the fortnight ending Monday last the wind blew exclusively from some point between N. and E.S.E.—E. M., *Berkhamsted.*

**London Pansy and Violet Society's show** will be held at the Crystal Palace, Sydenham, on Saturday, July 6.

**Names of plants.**—F. T.—1, *Dendrobium Wardianum*; 2, apparently leaf of *Phaius maculatus*; 3, Laurel leaf, apparently eaten by caterpillars.

**The Wild Garden:** or, the Naturalisation and Natural Grouping of Hardy Exotic Plants, with a chapter on the Garden of British Wild Flowers. Fourth edition, with wood engravings from drawings by Alfred Parsons revised and enlarged. Lemn 8vo, lines cl. th. Price 12s.; well bound in half morocco, 18s. Through all booksellers.

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"This is an Art  
Which does mend Nature: change it rather; but  
THE ART ITSELF IS NATURE."—*Shakespeare.*

## ORCHARD AND FRUIT GARDEN

### DISBUDDING PEACHES.

THIS important operation will be receiving attention in early Peach houses, and on its correct or otherwise performance depends in a great measure the success or failure of the trees in the future. That head gardeners are quite alive to the importance of proper disbudding is proved by their doing the work themselves in the majority of gardens. This was brought before me very forcibly a short time ago by a gardener from a large place, asking me if I had a man that I could recommend him as foreman for the fruit department that could be relied upon to disbud Peaches properly. On replying in the negative, and also stating that I always did that operation myself, the reply was, "It is always the same. During the whole time that I have been head gardener (about twenty-five years) I have never had a fruit foreman that had performed the work, his former chiefs having always done it." If this is general, and I believe it is, the question might be asked why gardeners do not instruct their young men more on this important matter, so that when they are called upon they may be able to do it in a correct and satisfactory mode. For the future I shall try to instruct any young fellows that may serve under me how the work ought to be done. Disbudding Peaches is like all other garden operations, viz., performed in different modes in many places, according to the practice of the head gardener, and it is astonishing to see how well Peaches and Nectarines succeed under what some men would call drastic treatment in disbudding. What I should term drastic measures is to do all the disbudding at one time, which I have seen done on several occasions in places that I was a probationer in. In each case the disbudding was thoroughly done at once, plenty of room being allowed for full expansion of wood and foliage. Although growth seemed to cease for about a week after the disbudding, the trees soon made a fresh and vigorous start and perfected fine crops of fruit. The soil in each place was very good for all stone fruits, and it is doubtful whether success would have followed similar practice on a very light and sandy soil, and it is also a question if better results would not have followed a more rational system in the gardens referred to. On all sorts of soil and on any form of trees, I believe firmly in doing all disbudding by degrees, thus avoiding any checks, with the consequent liability to red spider or other insect attacks. It is a very easy matter to commence by removing all the worst placed buds immediately they are large enough to rub out, and afterwards taking away those buds that are not required in the more favourable positions. Only a keen eye and experience will teach which buds should be left to form new wood, but as a rule it is wise to leave a bud as near the base of each shoot as possible, also one near the end to draw up the sap, and keep fruit that may be thereon from swelling. For a number of years I have allowed these terminal buds to form about five or six leaves, and then stopped any further growth by pinching out the points. By this means grand fruit is obtained, as all the strength is thrown

into the fruit. If no fruit is on the shoot and there is room for full extension of the young growth, no stopping is done, but they are allowed to go on unchecked. Where the soil is light and not of the most suitable character for obtaining large Peaches and Nectarines, I can strongly recommend the system of stopping the young growth beyond the fruit. The soil I have to manage is of that description, but by thus checking growth and giving applications of plant food, I have had many Peaches weigh up to 18 ounces each. At the same time I believe the early and gradual system of disbudding has been a considerable factor in the fruit attaining such a size, as no check to either growth or root action ever takes place, and although more time and extra work be involved by doing it, full compensation is received by the highly satisfactory progress made by the trees and their fruit.

W. G. C.

**Grape Gros Colman.**—Mr. Young (p. 94) speaks disparagingly of this Grape as regards the quality of its fruit, which I agree with, but, at the same time, it is of all Grapes the most useful for invalids, being very juicy, fleshy and not sweet, which is a great point in such a case. Where attention is paid to the culture of late Grapes for the benefit of invalids it is well to grow a few canes of this kind. Here Grapes are reserved for the exclusive use of invalids after November, none being ever used by the family.—E. M.

**Apple Devonshire Quarrenden.**—When writing on dessert Apples in a recent issue I quite intended mentioning the above Apple, as I consider it an excellent and most useful variety. Old gardeners will know it well, especially those located in the eastern counties where it may be frequently met with. We frequently see two Quarrendens catalogued, the red and the Devonshire. Some gardeners think they are identical. I do not. The former is larger, thicker in the skin, resembling the Norfolk Beaufin, and without any trace of colouring in the flesh, and altogether inferior to the old Devonshire Quarrenden. The original variety ripens in September, is fiery red externally, with a pinky flesh, and although but small, crops regularly, is of excellent flavour, and keeps a considerable time after being gathered. Twenty years ago large orchard trees of this Apple were very plentiful in Essex, the fruit being much valued for the dessert.—J. CRAWFORD.

**Digging round fruit trees.**—There is much truth in the statements of "Y. A. H." and "J. C." respecting the practice of digging too near fruit trees, whether these be on walls or in the open garden, but the limit which is very often advised to be given up entirely to wall trees cannot always be entertained, for the reason that the space is invaluable for small vegetables and salads; and in gardens of limited extent from which a large demand has to be met it is altogether out of the question to devote several feet in width of border exclusively to the wall trees. It is possible to grow early Lettuces, Radishes, Turnips, Horn Carrots and even Potatoes without disturbing the soil deeply about the roots of trees, particularly if old potting soil and decayed leaves can be put on the surface for the particular purpose of growing such extra crops. Usually a narrow path is provided for the convenience of attending to the trees and gathering their crops, this varying in width and distance from the walls according to the requirements of those in charge. By some, the paths are never allowed to be broken up with spade or fork; in other cases just the opposite happens, and under both systems good returns are known to result. The narrow border between wall and path is just the place to forward an early batch of salads and vegetables to follow those forced under glass, and there are cases where as much value is set upon these as upon the fruit furnished by the trees. Therefore the question of

digging about and cropping near fruit trees is one that must be governed by individual convenience and demand. By all means devote a good space to the roots of trees when this is found to suit the requirements of the place, but no doubt plenty of readers can ill afford to do so, and are compelled by force of circumstances to do what they would not otherwise attempt. Exactly the same applies to trees growing in open borders, although here there is not the same value set on the space for planting as near walls.—WILTSHIRE GARDENER.

### LARGE AND GOOD GOOSEBERRIES.

HAVING grown the Lancashire Prize varieties of Gooseberries for many years, I can confidently recommend the following sorts to those who may be thinking of forming a collection. Some imagine that the larger Gooseberries are without flavour. Such, however, is not the case, many of these being delicious when properly exposed to light, air, and sun. Indeed, they well repay wall or trellis culture, and are in September preferred by many to any other fruits. When grown as ordinary bushes the trees require to be kept extra thin, and as their habit of growth is somewhat awkward, the lower branches should be supported by short forked sticks. A very good method of preserving the fruit from the ravages of birds is first to construct a framework of rough wood over the trees, afterwards covering the same with small-meshed wire netting. This may remain over the trees from year to year.

Taking red varieties first, I would place Clayton in the foremost rank, this being a large handsome berry, of brilliant colour and good flavour. It ripens rather earlier than many others. Duke of Sutherland is another grand berry, the tree being a free yielder and capital grower. Dan's Mistake, a well-known fruit amongst exhibitors, must also be included, being beaten by very few of the newer varieties. Lord Derby, a variety somewhat late in ripening, is a first-rate fruit, and Speedwell is indispensable where size and appearance are important. The best white varieties include King of Trumps, Lady Leicester, an early variety; Freedom, also early; Alma and Careless, two varieties which for general good qualities have stood the test of time. The best yellows are Criterion, Leader, Leveller, a marvellous berry, seldom beaten on the exhibition table, and Trumpeter. In the green section, Drill, a very old variety, still takes a good deal of beating. Keepsake, an early ripening sort, Matchless, Plunder, and Telegraph, all of which are very fine in berry, of good colour and quality, may safely be planted with all the fore-named by those who intend exhibiting. J. C.

### DISEASED VINE ROOTS.

WITH the greater part of the roots so thoroughly dead as those sent, it is not to be wondered at that the crops were a complete failure. They could not well be otherwise. It has been my lot to have to renovate a considerable number of Vines, but never yet came across roots dead or dying in such an wholesale manner. In his footnote "J. P. M." states that these dead roots were taken from the inside border, but why did he not also mention whether the roots are alive or dead in the outside border, and then I could better have advised what to do in the matter! This is no ordinary case of failure, and the roots must have been very badly treated for them to have perished outright in the manner they have done. Root fibres, as I have frequently proved, are very easily crippled, an overdose of chemical manures frequently doing more mischief in this respect than those who use them have apparently any conception of, but it requires something extra strong to kill old roots. If the soil had not been well watered for many weeks or months this would have scarcely led to the death of the larger roots, and in any case those roots outside would have contributed more to the support of the crops as well as the inside roots than they appear to have

done. Supposing the roots both inside and outside are nearly or quite all dead from some cause not explained, it is very doubtful if the Vines are worth keeping any longer. Without an analysis it is not possible to say whether the soil of the borders is rendered unfit for the roots or not, but I should be disposed to cut a test trench a little way across the inside border at about 4 feet from the stems. From this the work of forking away the soil towards the stem could go on. If fresh, live roots are met with in appreciable quantities, then the soil is not poisonous to them, and there is also a probability of the Vines being restored to good health. But if only a very few live roots are found in the inside, and a similarly conducted search discloses the fact of the outside roots being in an equally bad plight, I should advise rooting them out and starting afresh, planting inside in a perfectly new border.

Making a new border and replanting fresh Vines is a formidable undertaking not to be entered lightly upon, especially seeing that in addition to the expense there is also a loss of one full crop and part of another to be reckoned with. We will, therefore, discuss the possibility of renovating the old ones, if eight-year-old Vines can be termed old. They are really not old in the ordinary sense of the word, as they ought to be in their prime. I and others have been successful in restoring Muscat of Alexandria Vines twenty years and upwards in age to a very profitable state, but then we had live, if very fibrous old roots to deal with. Vines just beginning to break may be lifted clean out of the soil, the long old roots being shortened to a length of 4 feet or thereabouts, and all be slung up, matted over, and kept moist, while the stale, old soil is changed for fresh soil composed much as follows: To every cartload or ten barrowloads of fibrous yellow loam add two barrowloads of fresh horse droppings, two barrowloads of old mortar or lime rubbish, two barrowloads of burn-bake, one bushel of soot, and one half hundredweight of crushed bones. After duly cleanly cutting over the ends of the broken roots, cut a few notches on the upper side of the old ones at intervals of 3 inches apart, and then relay all in the fresh soil much in the order as they spring from the stems. Vines treated in this drastic manner have actually given a few good bunches the same season, but it would have been better for the Vines and more profitable in the long run not to have cropped them till the following year, or when they were better able to withstand the strain. If Vines with their stems partly outside are treated in this manner, a mild hotbed should be formed on the border directly afterwards, this warming the soil and hastening root action considerably, and it would pay well to warm up inside borders in the same way. Vines with their roots gone principally beyond control and doing badly accordingly might first have the large old roots bared from the stems outwards to a distance of 3 feet or rather more, and after they are notched be covered with a rich compost to which "burn-bake," that is the residue from a garden smother or slow fire, has been freely added, and a mild hot-bed formed over this. By the following autumn this should have promoted the formation of numerous healthy young roots, which might be led out into fresh compost added after the whole of the border in front with the straggling roots has been cleared away. If soil cannot be collected for a fresh border or even for adding breadths, that is to say, forming a border piecemeal, those in charge will have to be content to bare the surface roots at least half way across the border, notching, but not shortening the large naked old ones. Then if these are covered with 6 inches of fresh rich compost, a mild hot-bed of leaves and manure would draw fresh roots into it, good surface treatment subsequently keeping and increasing them where they derive the full benefit of what is given in the shape of manures, to say nothing of the extra warmth and air that fall to the lot of roots near the surface. "J. P. M." might first see what can be done towards recovering the old Vines, and at the same time be pre-

paring for the possibility of having to root them out. If eyes are at once placed singly in small pots and started in a brisk bottom-heat, the plants resulting if shifted into 6-inch pots before they become root-bound would be quite large enough for planting in an inside border by the first week in May. Twice the number intended to remain permanently should be raised and planted, and then if all goes on as well as it ought to do, the supernumeraries will be quite strong enough to give two or three bunches each next season, cropping them still harder in 1897, and rooting them out when the permanent rods are in a condition to bear three bunches apiece without any after ill effects. If it is decided to root out the old Vines at once, there will be time to replant small pot Vines of last season's growth, and in this case again supernumeraries ought to be provided.

I.

#### RAISING AND PLANTING VINES.

ALTHOUGH great numbers of pot Vines are still grown for sale in strong bottom-heat, gardeners are every year becoming more opposed to planting them in permanent borders. That the plan of employing much bottom-heat is wrong must be evident to all who have had even the least experience in the matter. In many instances young Vines in nurseries are plunged in a bottom-heat of not less than 90° in not over light houses and as thick as Beans in a field, little air being admitted in order to force growth as much as possible. Under such conditions the roots formed are soft and flabby, the fibrous portion invariably perishing when the pots are removed from the plunging bed and exposed to the weather against walls and in open sheds in autumn. If anyone doubts this, let them turn one of these Vines out of the pot and examine the roots, and they will soon become convinced. Of course, those grown for fruiting in pots are allowed more room, the earliest rooted being selected and put into larger pots, but even these would be much better with less heat at the roots, and though of less circumference, yield better crops in the end. A friend of mine, a successful Grape grower, who always raises his own Vines on the non-bottom-heat principle, recently planted a house, but not having Trebbiano he purchased a Vine of it which had been grown in strong bottom-heat. It looked strong, but had few living fibrous roots, and after exhausting its stored-up sap ceased growing for several weeks until new roots were formed. These came slowly, and by the time growth had reached half way up the house, those raised at home, and which when planted were no thicker than goose quills, had reached the top and gone some distance down the back wall. As soon as Vine eyes have well rooted round the small pots and made growth 4 inches in length, they should be shifted into pots 4½ inches in diameter and again returned to the warm bed until growth is again resumed, after which they should be raised and stood on the surface for a week, and finally on a Moss-covered shelf near to the roof glass and free from draught. The Moss serves to retain the moisture.

A Vine stove or similar structure suits them well till a second shift is given and as the season becomes somewhat advanced, less heat will suffice and plenty of air become necessary. For planting canes 9-inch pots are large enough, as by these becoming quickly filled with roots early maturity is encouraged. A good holding loam, a little bone-meal, and some old plaster refuse form a good rooting medium, as manure water can always be given when needed. When hardening off the Vines in autumn I prefer placing them in a cool airy house to standing them out of doors, as they are more under control, and root moisture can be regulated at the cultivator's will. Vines grown in this way will have abundance of hard fibrous roots, which will survive the winter and promote a healthy vigorous growth when planted the following spring. In regard to planting, some prefer cut-backs, and doubtless they are best for outside borders. For

planting inside, however, I have a great liking for Vines raised the same year and planted in a growing state, say, in May or June. If the soil about the roots is warmed, the young Vines do not feel the removal at all, but go right away and soon reach the top of the house. Fresh horse manure spread on the surface will draw the roots upwards and prove an effectual trap for wireworm. I have also seen good results from shaking yearling Vines out of the pots, cutting back all long shoelace roots and repotting, planting the same out in a warm inside border when 1 foot or 2 feet of new growth was made.

J. CRAWFORD.

#### DESTROYERS.

##### HARD WINTERS AND INSECT PESTS.

AN impression prevails that periods of severe weather are instrumental in diminishing the number of enemies that gardeners have to contend with. This may be the case as regards birds, for undoubtedly many are starved to death in hard winters, but I am convinced that neither slugs nor snails are reduced in number by prolonged frosts. I remarked particularly after the nine weeks' uninterrupted frost that we experienced several years ago, and when the soil was frozen to a depth of nearly a foot, that these destructive little pests were the following spring as numerous as ever. Their long rest seemed to have rendered them more than usually voracious. I am convinced that snails will travel the whole length of the garden in search of a safe retreat for the winter. Ivy either on walls, trees, or as edgings is sure to attract them, as will also Box edging. They may be frozen as hard as a brick and will take no harm, as I have more than once proved. Where snails are troublesome among vegetable crops and the walks are bordered with Box it is well to examine it before increasing warmth and tender vegetation induce these troublesome pests to wander from their winter quarters. Many hundreds may be captured in this way before they have the time to do any damage, and as one snail will lay about fifty eggs, the destruction of a few dozens only in early spring will save the grower much annoyance later on. And here it may not be out of place to allude to the incessant warfare waged by the thrush on snails. It is, in places at least where snails abound, a mistake to kill off thrushes. Far better to encourage a pair to nest in the garden. Being surrounded by fields, I am liable to be much troubled with snails and slugs, but for several years past there has been a considerable diminution in the number of the former. This is, I believe, in a great measure owing to a pair of thrushes building and bringing out their young in the garden. By the quantity of shells laying about it is easy to see how busily the birds have been at work. The thrush is in some ways troublesome to the gardener, but I am confident that, taking the year through, he does more good than harm. As regards aphides, caterpillars, and grubs of various kinds, I am doubtful if severe weather has any diminishing effect on their numbers. The latter find their way to a considerable depth below the surface on the approach of winter, and the eggs of moths and flies are as impervious to frost as are the seeds of most plants. Were it not so, some species of insects would be almost or quite exterminated in such weather as we are now passing through. The eggs are, so to say, glued on to the plant or tree on which the perfect insect is to feed later on, and unless they fall a prey to birds they will come to life in spring, no matter what the winter may be. The blue and long-tailed tits destroy myriads of eggs during the winter months. They are constantly titting from tree to tree and eating the eggs of moths and aphides, which, invisible to the naked eye of man, are easily found by them. If one could but keep the blue tit from ripe fruits it would be the most valuable friend the gardener has.

J. C. B.



## A WATERSIDE GARDEN.

OUR illustration represents the fringe of the Water Lily pond in the College Botanic Gardens, Dublin, and is a simple example of what may be done in beautifying water margins in a permanent manner. The pond itself is not a large one and is of oblong form, and had a stiff and ugly outline before its bare banks were covered with vegetation as here shown. Some few years ago the water supply was augmented, and the margins were then roughly trenched, plenty of fresh manure being added. At the same time the best of M. Latour Marliac's seedling Water Lilies were planted in the pond, and the margins were planted with *Gunnera manicata*, the large-leaved plant on the left of the picture, and with the red and green-veined forms of *G. scabra* seen at the further end. Golden and Cardinal Osiers

room should be given them, and it is well-nigh impossible to supply too much manure either in the soil at planting time or in the shape of top-dressings afterwards. Wherever there are ponds or streams in or near the garden it is easy to make their margins full of interest by fringing them with bold subjects such as those shown in our picture, and the best time for planting is in April or May, so that a good growth is obtained before winter sets in.

F. W. BURBIDGE.

**The weather.**—No frost so intense as that we are now getting has been felt in this neighbourhood since the Christmas eve of 1860. Of that night no actual record has been kept, as the thermometers then in use here would not register much below zero, but it was the generally received opinion that from 42 to 45 of frost were experi-

when we registered 3 below zero. This only continued for one night, but much damage was done to Roses and shrubs.—J. C. TALLACK.

## CHRYSANTHEMUMS.

## THE CHRYSANTHEMUM GROWN FOR SPECIMEN PLANTS.

ONE would think, to read much that is written about the Chrysanthemum, that the principal use of this plant is to grow big blooms for exhibition. The object is laudable enough in its way, for large well-grown blooms are very beautiful, but it is possible that they are disappointing to some people who take notes of the best blooms and want to see them on the plants in their own



A waterside garden. Engraved for THE GARDEN from a photograph sent by Miss Armstrong, Clifton Terrace, Monkstown, Dublin, Ireland.

also fringe one side, and there are masses of *Osmunda*, *Lythrum*, *Arundo conspicua*, *Iris*, *Polygonum*, *Bamboos*, *Saxifraga peltata*, and *Arum Lilies* (*Richardia*). One of the most effective plants early in the summer is the golden-leaved *Iris pseudacorus*, and *Primula japonica* also flowers and seeds freely along the grassy margin. During the warmer months of the year *Nymphaea Chromatella*, *N. Marliacea carnea*, *rosacea*, *exquisita*, *N. Leydekeri rosea*, *N. pygmaea Helveola*, *N. alba*, *N. candidissima*, *N. odorata*, and other kinds are very beautiful in form and colour. *Aponogeton distachyon* flowers and seeds freely, and *Villarsia nymphaeoides* is almost too luxuriant.

Hundreds of golden carp are happy also in summer gliding about amongst the Water Lily leaves, but they are now under 8 inches of ice with the skaters gliding over them.

In the planting of such rampant growers as are the *Gunneras* and *Polygonums*, plenty of root-

enced. At that time Laurels and Portugal Laurels were killed wholesale. Hollies perished in great numbers; the buds on the Walnuts were killed—though of course they were then dormant—and even the Oaks suffered greatly, though the severe frost only lasted a few hours. It is to be hoped that the present frost will not have such disastrous results, but much damage will have been done, and many things hardy in the majority of winters will undoubtedly be killed. For weeks past we have been frost-bound, but nothing uncommon occurred until the afternoon of Tuesday, the 5th inst., when the thermometer fell rapidly, reaching zero about 8 p.m., and getting gradually lower until 37° of frost was registered. Yesterday (the 6th), in spite of strong sunshine, it froze all day, and by 7 p.m. zero was again reached, and by 1 a.m. to-day 39°, or 7° below zero, was registered. There is every prospect of a repetition of severity again to-night, the wind being easterly and the barometer high. During the past eight years the previous lowest reading of the thermometer was on the morning of January 18, 1891,

gardens. For instance, in THE GARDEN (p. 58) we read that a variety—Miss Dorothea Shea—was distinguished as being the best bloom in a large exhibition, not a word as to the plant the bloom was cut from, until W. A. Young says his plants grew to a height of 9 feet, and that he does not think he will grow this kind again. This is a fault with other varieties, and it does seem that the time has come for raisers of the Chrysanthemum to look for dwarf, sturdy-growing plants, that will not grow so tall that ladies cannot see the beauty of the flowers without mounting a ladder. Mr. Tallack on the same page writes heresy on large blooms. He likes Mrs. H. Cannell—says when well grown it is magnificent in size, but by size he does not mean depth. He hates depth, and terms it lumpiness. Surely all the best judges are agreed in giving good points for depth. The great height of the plant Mr. Tallack says is its one bad point. This spoils many otherwise

beautiful varieties. I mention the point of height because the best specimen plants are obtained from such as are of moderate growth. To obtain good specimens either for exhibition or to place upon the stages of the conservatory, I would advise putting in the cuttings early, and they should be taken from root suckers—that is if root suckers can be obtained, for I have often found it impossible to get such; whereas they can be readily obtained growing from near the base of the main stems, and in this case it may be better to dig the plants out of the soil entirely and repot in a 5-inch or 6-inch flower-pot after removing most of the soil from the roots. For ordinary purposes it is not essential that the plants should be grown to a single stem seen distinctly above the mould, but for exhibition purposes it is the general rule that each specimen should have one stem clearly visible above the potting soil, so that if any growths are produced close to the surface of the ground it is better to rub them off, as four or five shoots from the main stem are quite sufficient to form a good specimen. All varieties of *Chrysanthemums* of medium growth or below it should be grown from these old plants, the more vigorous varieties from cuttings put in either in December or very early in the year. If medium-sized or small specimens only are required to embellish the greenhouse, the cuttings may as well not be put in until March. Whenever they are put in it is as well to see that they continue to grow without any check; if they receive a check, either by becoming pot-bound or by being placed out-of-doors from a garden pit or frame without being well inured to the transition by free exposure, the chances are that the plants may be thrown into bloom in the month of May. I well remember growing on a fine set of plants some twenty years ago, and all went well until May, when the plants had grown a considerable size, and one after another formed hundreds of flower-buds, and the most remarkable part of it was that I could not trace the cause. Sometimes the cause is apparent at once: it may be the fault of the gardener sometimes, but a check to the plants' growth may occur and the cause be beyond the skill or knowledge of the best cultivator. I remember one occasion, which I may give as an illustration of the old adage, "there is many a slip between the cup and the lip." The first collection I had under my own control was in 1859, and I worked hard to get them up into a fine healthy condition. The weather was fine the first week in May and I had all the plants out by the 8th of that month, when that very night came a change and the poor plants were exposed to 8° of frost. Since that time I have always been careful not to expose the plants too freely until the end of May, and even that is not the safety point, for I remember later in 1862 or 1863 the Potatoes and Brackens were cut down by a sharp frost early in June in the county of Surrey, and many *Chrysanthemum* growers will long remember the severe frost in May of last year, when many fine collections were cut down near London. If the plants can be laid down and a covering of scrim or tiffany thrown over them they may be saved, or a light tiffany covering may be used without disturbing the plants.

It may be well to give a few directions as to the cultural requirements of specimen plants. It should ever be borne in mind that the roots are formed rapidly, and they speedily exhaust the soil, so that it requires renewal. This can best be done by repotting. Many cultivators, for convenience and to save trouble, shift their *Chrysanthemum* plants from small pots into the sizes wherein they are to flower; but plants

trained as specimens make greater masses of roots than those grown to produce single blooms. The reason of this is obvious. The specimen bloom plant has all the growths pinched out; one main stem grows up, which in time divides into three, or perhaps two only, and two or three blooms are all that will be obtained from it. The specimen plant may produce a hundred or more blooms. I have known a specimen of Mrs. George Rundle—a two-year-old plant—produce 300 fine blooms; it was grown to one main stem, of course. To produce so many blooms considerable leafage is necessary, and the more the plants spread, as rapidly do the roots increase. The best way to repot specimen plants is this: The cuttings are put in singly into deep 2½-inch pots, and when they have well rooted repot them into large 3-inch pots, from these into large 4½-inch or 5-inch, next into 7-inch, from thence into 9-inch pots, and they will produce their flowers in 11-inch or 12-inch pots. Of course, repotting must take place in each case before any of the pots get root-bound. By these successive shifts the plants grow steadily and fill the soil completely with their roots from centre to circumference. The same rich compost is needed for pot plants as is used to produce large blooms. They require weak liquid manure water as soon as the flower buds set, and by this time the plants ought to be well established in their flowering pots. As the buds set the growths may be trained into position in order to form a well-balanced, moderately dwarf plant. Some cultivators have an idea that the more dwarf a plant can be grown the better it is; indeed, I have seen immense specimens as flat as a pancake measuring 15 feet in circumference and not more than 18 inches high. This is a grievous mistake; depth should be considered as well as height, and the whole plant should possess its natural proportions. A very large specimen should be proportionately taller than a small one. The plants should, of course, be grown out of doors in an open position well exposed to sunlight, and the skill of the cultivator is exercised in keeping the leaves in a healthy, green condition until the flowers are fully expanded. Green fly attacks them, and this must be disposed of while they are under glass by fumigating. If they are attacked out of doors, tobacco powder dusted upon them from a pepper-box will have the desired effect. A rather more insidious enemy is that troublesome parasite, mildew; it is almost sure to appear in clouds in October; in fact, so certain are we of its being present, that I always syringe the plants well with soft soapy water in which a liberal proportion of flowers of sulphur has been mixed up; the plants are laid upon their sides and the under sides of the leaves are well syringed. This method of dealing with the mildew is better than that of dusting with dry sulphur; it is more effectual at first, and also more lasting. After this thorough syringing the mildew is not likely to appear after the plants are taken into the house.

It may not be amiss to treat a little of the pompon *Chrysanthemum*. The little *Chusan Daisy* is a different plant altogether from the Japanese or Chinese species. To produce good plants, the cuttings should be put in early. They would do now with a little bottom-heat, and as cuttings and young plants their treatment is exactly the same as the others, but they can be flowered as well in 9-inch flower-pots as the large-flowered section can in 11-inch ones. Smaller specimens are much more effective than large ones, but for exhibition purposes the larger the specimens are the better, if size of plant and quality in the blooms are combined.

Many years ago I cultivated very large specimen plants for exhibition, and I counted upon one of them 1400 blooms open at one time. The plant was grown from a cutting planted in December trained to one stem, and flowered in a pot 8½ inches in diameter, inside measure.

J. DOUGLAS.

**Chrysanthemum Boule de Neige.**—"E. J." scarcely quotes me fairly when criticising my remarks as to a certain similarity between Boule de Neige and Ethel. He should in fairness have included my remark, "the difference being in size, Boule de Neige being smaller flowered." As "E. J." may see if he will, I was writing at the time of the flowers themselves and not of the habit of the plant or of the section to which it belonged. I did not wish to make my notes over long, and perhaps was not quite so explicit as I might have been. However, the points of similarity which I see are these: erectness of petal, the exact shade (if I may say so) of whiteness, and the tendency to show a black centre. I do not know that this last point is a blemish if not carried to excess, as the black centre serves to intensify the whiteness of petal. The shape of petal is certainly different, Ethel being, as "E. J." says, pointed, but I think he will find that many of the petals of Boule de Neige are not rounded, but slightly indented at the end. With regard to length of petal, I think there is but little difference when taken in proportion with the size of the individual flowers. I can scarcely agree with "E. J." that neither of these two will be required, as Boule de Neige will be always acceptable for supplying sprays of bloom when large flowers are not cared for.—J. C. TALLACK.

**Chrysanthemum W. H. Lincoln.**—In writing of W. H. Lincoln "S. W. F." (p. 104) gives an instance which—unintentionally on his part—bears out my note on disbudding this variety. All I wished to recommend was to grow the plants on for terminal shoots and to reduce the buds to one on each of these instead of attempting to get sprays of bloom. I gave the number of such buds as from nine to twelve on a plant, this being the average number of shoots. Of course I was writing of one-year-old plants grown in ordinary-sized or 8½-inch pots, and I think the number of flowers given relieves me from the charge of excessive disbudding. As a matter of fact, two at least of our plants bore fourteen well-developed flowers each. "S. W. F." takes an old stool, plants it out, and lifts the plant in October, putting it then into an 11½-inch pot. No wonder the plant did its own disbudding and that the "centre bloom seemed to monopolise the sap to such an extent that the others refused to swell at all, or developed into small, mis-shapen blooms, showing but a dozen or so yellow petals." I prefer to do my own disbudding, and not to leave it in this way to outraged Nature. "S. W. F." again, unconsciously and with delicious naïveté, says that "a nurseryman offered 4s. for the plant as it stood," &c., one penny per bloom and the pot thrown in. I do not envy your correspondent the gold mine he would open up by growing "a few hundred such plants" even at double the price offered.—J. C. TALLACK.

**Carnation Duke of York.**—Has any reader of THE GARDEN any knowledge of this new tree Carnation? I learn that it is a capital winter bloomer, and that the London market growers are propagating it extensively. If this be true, it will be a great acquisition, as its colour is so much in its favour. Its fragrance also is, I believe, similar to the old crimson Clove, this fact also adding greatly to its value. I have this year grown Urial Pike for winter work, and am so far satisfied with it. It opens well and the colour is truly lovely. Its scent is likewise welcome. I do not think it will ever make so much "grass" as old tree varieties, but if the plants only grow to half their size, it will be worth growing, its colour being so distinct.—J. C.

FLOWER GARDEN.

PRIMULA NIVALIS.

THIS is a remarkably fine and distinct species now almost lost to cultivation. Dr. Regel describes it as one of the most beautiful species of the genus. It is found in the Alps of Afghanistan and Nepal, but is a common Siberian Primrose. The flowers vary from reddish or rose-coloured to deep purple and violet. *P. n.* var. *purpurea*, a typical Himalayan form, is one of the most difficult Primroses to manage under cultivation. It seems to require being kept per-



*Primula nivalis*. Engraved for THE GARDEN from a photograph sent by Miss E. Willmott, Warley Place, Great Warley, Essex.

fectly dry during the late summer and autumn. Indeed in its native habitat we are told it is buried in snow from early October until May, and although this may not account for our want of success, it seems to point to the fact that our open moist winters are the reverse of welcome to *P. purpurea*. It is a very handsome Primrose if it would only stay long enough with us to enable us to find suitable means for growing it. It grows at elevations of 10,000 feet to 14,000 feet in the Himalayas.

**Violets in frames.**—The past fortnight has been very trying to Violets, especially where not growing in heated pits, so that frost can be kept out and the lights uncovered each day. In many places frame batches have been covered up with mats and litter for some time past both by night and day. This will come hard on plants that are at all weakly or injured by spider. When they are uncovered they must be carefully dealt with, air being admitted only in small quantities at first. One of the greatest mistakes made with Violets is watering during winter. I always remove mine to the frames in October, give a good watering to settle the soil well about the roots, and then let them wait till February for a further supply. Winter waterings play sad havoc, causing wholesale damping, especially if sharp weather occurs and they have to be kept in darkness for some time. Hand-picking should be practised several times during the winter, removing all mouldy and yellow leaves and well stirring the surface soil with a pointed stick. Some advocate mulching the plants with cocoa-nut fibre in the autumn as a preventive against damp, but I never could see the good of it, and in spring it certainly keeps the sun's warmth and air away from the roots. Good cultivation in summer, so as to secure good sturdy plants, coupled with careful airing and surface stirring in December and January, are the only guarantees against the inroads of damp and disease.—J. CRAWFORD.

**The Hollyhock.**—I write a few lines on this grand autumn flower because it is the time to propagate plants for flowering next year. The

one desperate enemy we have to contend with in the process of propagation is the Hollyhock fungus (*Puccinia malvacearum*); it is in every collection, and the air seems full of the tiny spores which fly about like dust in the sunbeams. I tried to grow plants in an open field from seed where Hollyhocks had never been grown, and before the end of the season the disease was there in a virulent form. Where could it have come from? was the question, and sure enough it was in the parish, and at the railway station above all places, from whence it could be carried on our clothes as we passed to and fro. A fine florist remarked the other day when I was bewailing the disease, "How is it that we never had any of these diseases when I was a young man?" I could not answer this question; who can? The disease may appear on the cuttings or on the growths grafted upon roots. If it does, Condy's fluid can be applied to it with a small brush and it arrests its progress. The cuttings or root grafts must be planted singly in very small flower-pots in moderately moist soil. Plunge them in a moderate bottom heat and do not give them any water until roots are formed. Sometimes slow-rooting varieties require water, but it should not be given until it is seen they really need it. The succulent growths rot at the base if water is given to them too freely. Remove them from the frame as soon as it is seen they are rooted.—J. D.

COLOUR IN FLORISTS' FLOWERS.

OF course Mr. Douglas does not intend it, but his remarks—p. 91—as to the disregard by florists of his "pretty bizarre Carnation" which "had stripes and flakes of rose and purple on a white ground" are likely to lead those not familiar with florists' flowers to suppose that this combination of colours in the Carnation is "despised and rejected" by florists. It would be a pity at any rate if such an inference were drawn, for the reverse is the fact. The above colour arrangement is our pink and purple bizarre, one of the most cherished of our class Carnations. No one thinks a stand of "class" Carnations complete without this beautiful type being represented, as a glance at the reports of the exhibitions would at once show. The two leading flowers of this class are Sarah Payne, which this year celebrates its jubilee, having been bloomed as long ago as 1845, and William Skirving, which was first flowered in the wintry summer of 1879. Let anyone read the late Mr. Dodwell's enthusiastic description of the flowers in this class—pp. 98 and 99 of his book on the Carnation—if he wants to know the florist's appreciation of the pink and purple bizarre.

I saw Mr. Douglas's Harmony in flower at Gravetye in 1888, and I have Mr. Moon's excellent representation of it (THE GARDEN, December 21, 1889) before me as I write. It was a very pretty flower undoubtedly, but it could only be by courtesy a pink and purple bizarre: it had not enough of the bizarre character in it.

I also remember the pale rose flake Carnation shown at Slough on July 30, 1883. Mr. Douglas doubtless refers to Mr. Dodwell's Dorothy, a very pretty flower, which was much admired. It was a great favourite with the raiser, who, however, as he distinctly stated in his list at the time, did not offer it as a class flower. Dorothy, pretty thing as it was, was really as a rose flake but a half-developed flower. In a season or two the beautiful pale rose had faded away almost to nothingness.

Our bizarres and flakes having their own well-defined characteristics are naturally at exhibitions kept strictly to themselves. But so far from florists "despising" or "rejecting"

the beauty which belongs to Carnations of other types, classes for these are provided at the exhibitions of all our societies, so that no flower with any element of beauty in it suffers disregard or exclusion.

If a Carnation which is not a true bizarre or flake is refused admission to these classes, so equally is a flake or bizarre denied intrusion into the ranks of the other flowers.

M. ROWAN.

**Twelve good Rhododendrons.**—The following choice varieties of Rhododendrons may be relied upon for giving satisfaction where new beds are being formed. The colours are very telling, the constitution of the plants good and the habit of growth dense. Baroness Schroder, delicate white, finely spotted; Countess of Clancarty, beautiful light crimson, a magnificent truss; Earl of Shannon, fine deep crimson, showing well in the distance amongst lighter colours; Frederick Waterer, another of the crimsons, very fiery, extra good constitution; Helen Waterer, a pure white flower, with a crimson margin, very telling; John Waterer, a deep glowing crimson, extra free bloomer, plant very vigorous; Lady Eleanor Cathcart, a rose-coloured flower, with numerous chocolate spots, delicately beautiful; Michael Waterer, rosy scarlet, a very bright flower of large size, plant vigorous and foliage extra dense; Mrs. John Clutton, probably the best white in cultivation, very telling in the distance, especially when associated with scarlet sorts; Purity, a good white variety, with a faint yellow eye, an uncommon and distinct flower; Sir Humphrey de Trafford, a very showy bright rose flower, with yellow centre, indispensable; William Ewart Gladstone, very rich rosy-crimson, an immense truss, should be in even the smallest collection.—J. C.

WOOD SORREL.

(OXALIS ACETOSELLA.)

IT is well for us that of the large family of Oxalis, our familiar little wood plant should be one of the most daintily beautiful. In copses and mossy hedgerows and among the Moss under-



Wood Sorrel (*Oxalis Acetosella*). Engraved for THE GARDEN from a photograph sent by Miss Jekyll, Munstead, Godalming.

Larch and Spruce, where hardly any other plant will grow, this frail flower with its brilliant leaves makes one of the prettiest flower-pictures of early summer. It is well worth a place in the garden, best perhaps on some mossy bank among Ferns, where garden merges into wood; but it will do in almost any cool half-shaded spot where it will not be dried up in summer.

G. J.

**Supporting Hyacinth spikes.**—Difficulty is often experienced in supporting large heavy spikes of Hyacinths without spoiling their appearance. Sticks are unsuitable, as unless placed in a slanting position—which looks bad—they must be thrust through the bulb. Wire

supports are the best, being cut into the required lengths and bent at the base so as to overlap the bulb, the lower portion entering the soil of the pot. These can be gently worked in amongst the petals of the truss so as to come close to the main stem, to which they can be fastened at intervals by means of thread. If the plants are wanted for exhibition the wires are improved by being painted a green colour. The wire should not be used thicker than is absolutely necessary.—J. C.

#### FLOWER GARDEN NOTES.

**SWEET PEAS.**—A stretch of wire fencing on the top of a stone balcony some 50 feet long by 4 feet high was covered last summer with Sweet Peas, and the result being a decided success they will be used this year for the same purpose. Some stout boxes 12 inches square and as much in depth were made from 1½-inch planking, and painted outside to match the stonework of the balcony. Just a thin bit of drainage, consisting of a single layer of crocks and a handful of dry cow manure, was used, and the remainder of the boxes filled to within 1 inch of the top with a compost of three parts loam and one of short manure. The Peas were sown thinly in the boxes, and the latter placed in a cool house until the seed was up and the plants fairly well advanced. They were placed in their summer quarters in May, and brought in loosely to the wire trellis as the growth advanced with occasional lengths of twine, after culture consisting in keeping them supplied with plenty of liquid manure water and in the prompt removal of seed-pods. The variety grown was Emily Henderson, and I found it admirably adapted for the purpose. As stated in a former note, there is nothing to choose between this variety and Mrs. Sankey so far as individual flowers are concerned. They were growing together in the open last year, and towards the close of the season it was impossible after mixing the varieties to separate them. In point of growth, however, there was as much difference between them as between a very long and a short-jointed Vine rod, and it is this short-jointed, compact habit coupled naturally with very free-flowering properties that makes Emily Henderson specially suitable for growing under the conditions above named, although it must be noted that these characteristics were equally noticeable in open-air culture. If the new white Blanche Burpee, which is certainly unapproachable in size and form of flower, is equally short-jointed and free-flowering, it will be a decided acquisition. If Sweet Peas are to be sown in pots for future planting out they should go in at once. Sow preferably in small pots to avoid splitting the ball at planting-time, and when the plants are up harden off for a time before planting out. Birds will be found very troublesome where the seed is sown in the open, and a few coal ashes will have to be placed over the rows so soon as there is the slightest sign of seedlings coming through. They should be staked as soon as possible, and a few rows of cotton may be run round the bottom part of the sticks to check the ingress of birds. Where it is proposed to use Sweet Peas as a screen through the summer months and it is advisable that such a screen should present a fresh, bright appearance right through the season, the ground must be thoroughly well dug; also, if the weather prove hot and dry, heavy surface mulchings and occasional soakings of liquid manure may be required and constant removal of seed-pods will be necessary. If there is a doubt that attention cannot be given to these matters, it is better to give up the idea of a screen of Sweet Peas and to utilise such things as Canary Creeper and the green and variegated forms of *Humulus japonicus*, for if there are few more beautiful features in a garden than a healthy row of Sweet Peas clothed with flower from top to bottom, the same row has a very rubbishy appearance when comparatively bare of flower and yellow in foliage.

**PREPARATIONS FOR SUMMER.**—Where a considerable quantity of dark foliage stuff is required of the height of ordinary Pelargoniums and Be-

gonias, the highly-coloured or fine-leaved Beets, as Dell's Crimson or the Draca-na-leaved, will be found useful, and if the ground where they will be required is not at liberty, it is advisable to sow in small pots towards the end of the present month. I am not, however, an admirer of Beet for flower garden work; there is a still, heavy look about it which no form or style of planting can alter. It is much better where this kind of foliage is required to work up a good stock of herbaceous Lobelias. One gets nearly the same shade of colour in the leaf, and in addition—albeit somewhat late in the season—the grand spikes of flower. Very pretty and effective beds on a large scale can be made by planting groups of these Lobelias alternately with Pentstemons and working a carpet of dwarfier stuff—Violas for example—between them. In overhauling the stock of Lobelias that were autumn-lifted and packed away with the Strawberries in a cold pit, and that have now been cut to pieces and boxed, I was particular to note if there was any sign of the rotting of which some correspondents have complained, but found no trace of it. The majority of those plants to be raised from seed that are likely to be required for the flower garden through the coming summer need not be sown until the beginning or middle of next month, but if anything is left over that should have been included in the late January sowing, it should receive immediate attention—such things, for instance, as the hard-seeded sub-tropicals, silvery Centaureas, and Begonias. So far as the fibrous section of the last-named family is concerned when a stock of any given variety or varieties is once acquired, the old plants can be lifted, stored away in boxes for the winter, and divided and started early in the year. In addition to their value for outside planting, we find them useful as box and vase plants, also in pots for massing in large bowls for the dinner-table. If Fuchsias are to occupy a prominent position in the garden, young plants should be grown on quickly to secure stock of well-shaped stuff by the end of May, always choosing those varieties combining a compact growth and free-flowering qualities. If Dahlias are to be raised from seed, this should go in at once, and if any propagation by cuttings is required, the old plants must be soon started. It is a mistake to delay the propagation of these plants; they want rather a long season, and if only very small stuff at planting time, they are so long making headway that the season is very far advanced before they are well in flower.

CLERMONT.

E. BUCKELL.

#### SWEET PEAS.

FOR affording a heavy and continuous supply of cut flowers from June till November inclusive, it is doubtful if any annual can be named that may be said to equal in value Sweet Peas. They were always more or less popular, but since Eckford, Laxton, and others have taken them in hand a considerable improvement has been effected both as regards the size and the colouring of the flowers. We now have a distinct and beautiful selection of named varieties, all of which can be depended upon to come true from seed. It is not to be expected that these novelties can be bought as cheaply as the older unnamed forms, but according as they get into more seed growers' hands the cheaper they will become. Thus we can now buy Mrs. Gladstone, a lovely pink; Princess Beatrice, pale rose-pink, and both very popular for bunching by themselves, at comparatively cheap rates; while Primrose, a pale cream; Emily Henderson, an American novelty, and Mrs. Sankey, both fine whites; Splendour, pinkish rose, extra fine flower and long stems; Monarch, crimson and blue; Countess of Radnor; Ignea, crimson and scarlet; and Dorothy Tennant, rosy mauve, are sold at rates that ought not to deter anyone from growing them. Of the medium-priced varieties some of the best are Captain of the Blues, Princess May, pale shade of heliotrope; Her Majesty, good rose-pink, with extra

strong stems; White Eagle and Blanche Burpee, good whites; while of the more expensive novelties, Duke of York, rosy pink and primrose, very attractive; Lady Penzance, rich rose, and a fine flower; and Meteor, orange-salmon and pink, can be safely given a trial.

When the packets of seed of these newer varieties are opened they are found disappointingly small, and it sometimes happens a want of quality is also very apparent. Now unless the seed is sound and good, committing it to the open ground before it has had time to become warmed somewhat is a risky proceeding, and even if it did germinate satisfactorily, there are always enemies to be reckoned with in the shape of mice and slugs. In order, therefore, to be sure of a good display the precaution should be taken of sowing the seed under glass, and now is the time to attend to this detail. Fill 2½-inch pots with good loamy soil and sow five or six seeds in each, covering with 1 inch of soil. Place in gentle heat and give a watering if the soil is at all dry. It is worthy of note that soaking the seeds in warm water till they have swollen considerably will hasten germination by about four days. When the seedlings are 2 inches in height, transfer to either a swing shelf near to the glass in a greenhouse or else to a cold pit, where they should be kept till strong enough to plant out. Those five or six plants, or even a less number, will be found ample for forming isolated groups or for planting 6 inches apart in continuous rows. We prefer the single groups, arranging these at the back of long borders in the kitchen garden at a distance of 4 feet apart, as being in the long run less formal than, and more profitable to, rows. The sites intended for these Peas should be broken up, where possible, two spits deep and some good rotten manure mixed with each spit. If this is done it matters very little if Sweet Peas occupied the same position in the previous year or years providing the manure, or, better still, a rich compost of fresh loam, manure and fine mortar rubbish is freely substituted for or mixed with the old soil. In our case there is space for at least seventy-five good groups at the back of beds of dwarf Roses, and as the position suits Peas admirably without detriment to the Roses, it is invariably chosen for the Sweet Peas. Curiously enough, the growth first formed by Peas raised in pots rarely reaches a flowering height, and it is the growths that spring up from the base that do such good service, these growing and branching more strongly and flowering more continuously than do any plants raised where they are to flower—requiring taller and stronger branching stakes accordingly. This might not be the case if they were raised more thickly in pots, and thick sowing is also a great mistake in the case of Peas sown where they are to flower. During the tropical heat of 1893 Sweet Peas gave few or no well-formed flowers, but those planted out and liberally treated at the roots, good soakings of water and liquid manure, as well as a mulching of manure being given, did not collapse utterly, but rallied and flowered freely in the autumn. It should be remembered that allowing rows or groups of Sweet Peas to early mature a heavy crop of seed is the surest way of closing their career, and if it is done, a succession of flowers can only be kept up by making successional sowings, something after the manner culinary Peas are sown and grown. We find that wholesale cutting of the flowers, either when fresh enough for use or else directly they have faded, has the effect of keeping the plants growing healthily, and, as a rule, those planted out of pots in April continue to flower freely till severe frosts intervene. Those who wish to save their own seed should sow or plant out choice varieties in positions not too conspicuous, allowing all the earliest formed flowers to be followed by seed-pods, and netting over where necessary to protect the crop from birds. Immature or badly ripened seeds are not what should content growers of Sweet Peas.

So much are Sweet Peas valued in some quarters, that it is deemed advisable to flower some in pots as early in the season as possible. If, instead of transferring all the newly-raised plants from a

warm house to cooler quarters, a few pots of them were given a shift into 9-inch or slightly larger pots and kept in gentle heat till the roots had taken possession of the new soil, then arranging them on a staging in a warm greenhouse, a few stakes and good attendance at the roots would do the rest. They would pay well for the trouble.

SELWOOD.

### WHAT'S IN A NAME?

TO THE EDITOR OF THE GARDEN.

SIR,—I am conscious that in discussing this question of botanical nomenclature in the pages of a horticultural journal I am somewhat in the position of a wrong plaintiff pleading in a wrong Forum, for in the first place I am not myself among those who are impatient of or object to the use of names of Latin or Greek origin, and in the second the decision of the matter rests with the Olympians of botanical science who presumably lie beside their nectar-forging thunderbolts of new botanic genera careless of the sighs and twaddle of mere gardening men. Anyhow, here we are, strictly speaking, *coram non judice*. But as (to judge from the initials under which he writes) we appear to have obtained the ear of at least one savant, and as "F. L. S." (p. 88) happens to make precisely the remark that has always struck me as ostensibly the most desirable line to take in botanical classification and nomenclature, I should like with your permission to amplify the subject a little further. I, too, would wish to ask whether the creation of sub-genera would not meet the case in very many instances, and if not, why not? Science is knowledge, and the simpler and straighter that we can make the paths to the temple of knowledge the better for all. No one, of course, would deny this in the abstract. The science of botany consists in the amassing of the knowledge of and classification of the vegetation of the earth. The direct objects of the science are various, and some of them no doubt have a direct bearing on the interests of man other than those connected with his pleasures, but the vast majority of men who are concerned or who concern themselves with vegetation in any variety unquestionably do so as attracted by the beauty of flower and foliage, or by the sympathy and interest which appear to be ingrained in man towards the vegetable life that surrounds him. I say this simply to establish the fact that gardeners are at any rate not without some *locus standi* in the matter. All botanists have probably been originally attracted to the study by the mere love of flowers, and not by any innate interest in "receptacles" or in the problem whether petals are hypogynous, perigynous or epigynous; while, on the other hand, to many gardeners (myself amongst the number) botanical interest, *i.e.*, the knowledge of the fact that a plant is "wild somewhere," is an immense enhancement to the interest attaching to it.

It is, of course, well known that what constitutes difference or distinction in the eyes of ordinary people, whether gardeners or otherwise, has not or need not necessarily have any value whatever from the scientific point of view. Apart from the colour of the flower, which is nothing to the botanist, and which he not unfrequently does not even concern himself to describe, even the growth and habit of a plant is, or may be nothing also—at any rate so far as differentiation of genera is concerned. On the other hand, what constitutes botanical difference, amounting to difference of genera, is indistinguishable to the vast majority of mankind; it is only vaguely understood by many who take a general interest in plants; while the authorities themselves frequently

seem unable fully to determine the nature of the differences, and are certainly often disagreed as to their relative values. It is, therefore, this very vagueness and disagreement on the part of the doctors of science which seem to entitle one to argue that, where the question of multiplicity or simplicity is more or less equally balanced, the scales should be allowed to turn in favour of the latter rather than of the former. Any well-known class of plants will do to illustrate what I mean, but I will take the Iris, the more so as Mr. J. G. Baker's monograph of the genus is a model, as I venture to think, of what classification should be, and where it falls short of being a perfect model (as from my present standpoint I am entitled to argue that it does) it affords an excellent illustration of how the principle of adhering to the common at the expense of the less common name might conceivably have been extended. The common Flag Iris (*I. germanica*), the common Spanish and English Irises (*I. Xiphium* and *I. xiphoides*), *I. sibirica*, *I. orchoides* (a very eccentric plant), and *I. tuberosa* are all Irises. No ordinary person seeing them in flower would, of course, suppose otherwise; but equally, of course, no ignorant person seeing them in growth or at rest would suppose them to have any special affinity, for they live and have their being under obviously distinct conditions. On the other hand, a plant which any of your readers who keeps THE GARDEN may find figured in Vol. XXXVI., p. 174, under the name of *Dietes Nuttoni* is not an Iris, but is a *Moraea*, to which it is now distinctly referred under the name of *M. spathacea*; and this leads me to ask (what is, indeed, the point of the whole matter) how far Mr. Baker would have damaged scientific accuracy had he transferred the whole of *Moraea* to Iris, treating it, it may be, as section 2 of that family?

The line of demarcation, he himself states, between Iris and *Moraea* has been drawn in different places by different authorities, and, following Bentham, he places Iris exclusively in the N. Temperate Zone, and *Moraea* in the Cape, Tropical Africa, and Australia, thus treating the Equator with the respect in which Sidney Smith's friend was so lamentably wanting. Whether or no the line of the Equator or any other line of latitude be botanically watertight I cannot, of course, pretend to say, but I am bound to admit that if all from the Northern Hemisphere are Irises and all from the southern are *Moraea*, we can reasonably ask for nothing further in the way of simplification. I may remark, however, before leaving the subject that very many of the *Moraea*s have previously been named as Irises. The well-known Peacock Iris, for instance, has been named and is often still sold as *I. pavonia*. It seems, too, to have been known as *I. tricuspis*, though its present orthodox name is *Moraea glaucopsis*. To revert, however, to the main question, is there any valid reason from the point of view of science why botanical nomenclature should not be simplified by the classification as "sub-genera" of many closely-allied families of plants now treated as separate and distinct genera? Would anyone be the less wise, for instance, if my old friend *Microglossa albescens* I regret *Microglossa*, by the way, with or without his asperate) had been allowed to retain its old name *Aster cabulicus*? which seems from the date (1842) when it was first "introduced" to be an interesting reminiscence of the first Afghan expedition. I am aware that the late Professor Asa Gray recognised a terrible lot of these rank-growing *Asters*, but being so many already, a few sub-genera under the heads *Microglossa*, *Boltonia*, *Stenactis*, &c., would but consolidate

their ranks. The same thing applies to the Bellflowers, for they are certainly all bellflowers, whether they may have retained the name of *Campanulas*, or may have been transferred or referred to *Codonopsis*, *Platyodon*, *Wahlenbergia*, or what not.

With regard to specific nomenclature generally, I agree with "F. L. S." that we cannot very reasonably complain. Many of the German and Russian names no doubt look and sound clumsy and uncouth to our eyes and ears, and many of the specific names given in England and Western Europe are silly enough. But in the former case, if the Russians are so good as to go to Central Asia to find us Irises and bulbs, it is only fair that we should allow them to name them as they please; while in respect to our own backslidings in this way, it must be remembered that the enormous number of new species constantly requiring naming makes it difficult to find tolerably good epithets, all the Latin and eponymous adjectives of any point or sense having already been used up over and over again.

As to the names given by nurserymen and others to florists' flowers, the matter is of very little importance to the vast majority of the gardening public. Few people, I imagine, trouble themselves to retain names of this sort in private gardens. The only real importance of a good name is when, as sometimes in the case of such a thing as a Rose, a plant becomes very popular or "indispensable," as the nurserymen say. Painful cases of this sort unquestionably occur sometimes. One of your correspondents, alluding to the eponyms of certain popular Roses, observes that in real life "they are doubtless worthy people." This, however, need not necessarily be accepted. One of them, I feel convinced, somewhere beyond the Alps, is a lady of exceptional charm, who, had she but known the destiny that awaited her, would have arranged to curtail her Christian name to one, and that a monosyllable; but with regard to another—here in the pages of a gardening paper devoted to the promotion of all forms of æsthetic beauty—we can have no compliments to exchange. The fact that somehow or other his name has got itself attached to the best yellow button-hole Rose in cultivation can only be regarded by all right-thinking men with sorrow and reprobation.

J. C. L.

### Books.

#### A HANDBOOK TO THE BRITISH MAMMALIA.

THIS book is the latest of the series known as "Allen's Naturalist's Library," and in many respects is the most practically interesting. Hitherto books on the British mammals have been few and far between, Bell's "British Quadrupeds" (the second edition published in 1874) being, we believe, the last to deal with the subject as a whole. In the present case the author has drawn largely from Macgillivray's "Manual." And as regards the habits of the creatures he describes, he has also had the benefit of the original observations of Mr. A. Trevor-Battye and Mr. W. E. de Winton. The valuable report of Mr. J. E. Harting on the "vole plague" has also been used to good effect, and the author acknowledges his indebtedness to Mr. A. G. More, of the Dublin Museum, for information about Irish mammals. The book opens the bats (order Chiroptera), the only mammals endowed with true flight like birds. A peculiarity of these animals is that the knee is directed backwards. Although in its flight seem-

\* "A Handbook to the British Mammalia." By R. Lydekker. Allen and Co., 13, Waterloo Place.

ing to prefer the neighbourhood of the earth, bats have been known to ascend to great heights in search of food. Its characteristic zigzag and uncertain flight no doubt gave rise to the saying, "blind as a bat," but if the defect of vision exists, the author makes no mention of it. With the public generally the bat can scarcely claim to be a favourite, being neither beautiful in repose nor graceful on the wing.

We therefore pass on to the insectivores, in some respects of structure allied to them. Among these we have the hedgehogs, moles, the shrews, rats, mice, voles, martens, polecat, weasel, hares, rabbits, the fox, wild cat, badger, otter, deer, wolf and bear. Many of them are names of terror to the agriculturist and breeders, and not always with discrimination. The hedgehog is an inveterate egg-stealer, and, on the other hand, the quantity of grubs and noxious vermin he consumes renders him serviceable in the garden. There is something also said for the mole, which, to quote Macgillivray, "by destroying vast quantities of worms and grubs is to be considered as conferring a benefit on the agriculturist." The voracity of the mole is said to surpass belief almost. A captive mole has been known to devour an amount of food exceeding its own weight in the course of a single day. Allied to the mole through the desman is the shrew, "an elegant little creature with thick, soft fur, a long, slender and pointed muzzle and a short body." Nocturnal in its habits, its shrill squeak is often heard in hedgerows and woods during the summer months. This harmless little creature was long the victim of a curious superstition. It was supposed that a shrew-mouse wherever it crept over a beast—be it horse, cow, or sheep—the animal was afflicted with great pain and threatened with the loss of the limb. A member of this family, the water shrew, has a partiality for the fry of fish and for frog-spawn. Of the carnivores, the Pine marten has almost disappeared from the southern and midland counties, though it is said to linger still in Suffolk, North Devon and, it is believed, in Epping Forest. In the lake districts it is regularly hunted with beagles and terriers. The ferret is a domesticated variety of the polecat. The stoat or ermine, though often confounded with the polecat, is in reality a very different looking animal. Its most remarkable peculiarity is the assumption in the colder portions of its habitat of a yellowish white winter dress in substitution for its normal coat of reddish brown fur. Akin to the stoat is the weasel, the relentless foe of the vole and of the common rat, and therefore a benefactor of humanity, notwithstanding the enslavements it occasionally makes upon the poultry-house. The badger, or, as it is called in many parts of England, the "broek," was formerly abundant in the British Isles, and is far from being rare, even in these days. Within the last thirty years the presence of badgers has been recorded in upwards of twenty-nine English counties. Few people, perhaps, are aware that many places, such as Brookenhurst, Brecklesby, Broekhall, Brockham Green, &c., derive their names from the badger or "broek," a nocturnal animal, living in pairs. Its favourite food is the grubs of wasps, and "except that it may destroy a certain number of the eggs of game birds, it is harmless alike to the game preserver and the farmer." The accusation of killing young foxes, which is sometimes brought against the badger, is said to be without foundation. A more founded charge is that of frightening sheep in their pens at night, by which the sheep, being often fat and heavy-coated, are liable to hurt through coming in contact with the feeding troughs. Of the rodents, the squirrel is a general favourite for its beauty, agility and dainty ways. It is less generally known, perhaps, that the squirrel will devour both young birds and eggs. This carnivorous habit, however, is said to be only a depraved taste on the part of certain individuals. The destructive family of mice and rats are dealt with at considerable length. The rat, according to one authority, is one of the worst enemies of game preservers—"a great devourer of pheasants' food, to say nothing of young pheasants"—which pro-

pensity, as the rat issues stealthily after sundown into the grass-side where the food has been scattered, gives opportunity to the brown owl to render important service. Not the least important part of the book is that devoted to the vole. Among the family Bovidae, mention is made of the Chillingham herd. These half-wild cattle are seldom met with now in British parks. They are described as handsome animals with brown muzzles, the insides and tips of the ears red, but elsewhere they are milk-white. Many of the cows are hornless. They are said to have the characteristics of wild animals in a pre-eminent degree, with some other peculiarities, such as hiding their young, feeding in the night and basking or sleeping in the daytime. Generally speaking, they are very timorous, though if pressed will turn upon their assailant. Their small size is said to be the effect of constant interbreeding.

#### NOTES FROM AN IRISH GARDEN—A RETROSPECT.

Quite a number of pretty and interesting things came into flower during the past season, notably a mass of the distinct *Helonias bullatus*. There were about 700 scapes in flower together, many of the clumps producing several each, the effect of such a number of pink-blue-anthered flowers together being charming, and I should say uncommon. *Lithospermum hirtum* in masses 2 feet or so across was excellent. In colour this is a deeper orange than *L. canescens*, and perhaps a shade taller, with a distinctly better constitution. My experience with this plant is that one should not follow too closely the information which collectors send home. I was told that it grew in dry, sandy places, which here did not suit the plant at all, and it was not until I placed it in quite a different and much moister spot that it grew freely. However, as it belongs to the Borageworts and as most of them like moisture, this was rather to be expected. Again, "dry, sandy places" is often a misleading notion, as the sand may be dry enough on the surface, but wet enough down below, and the far-reaching roots of a Borage may thus obtain all they need.

One of the most lovely things of the year was *Iris macrosiphon* var. *flava*. The flower, produced on a stem 3 inches or 4 inches high, was about 4 inches across, of a pleasing and distinct shade of creamy buff, covered all over with a sort of brick-red reticulation quite distinct and unlike any *Iris* I have ever before seen. This plant must have its toes at least in water. Another very charming plant was *Mertensia virginica roseo-coerulea*. The distinct shade of rose was clearly visible 100 yards away. The worst feature about this plant is that propagation will be necessarily slow. *Tiarella cordifolia albiflora* is quite distinct and worth recording. The flowers in this case are pure white, anthers and all. It is quite as free growing and flowering as the ordinary Foam Flower. *Arenaria montana* was quite excellent in all positions, but my best specimen was one which had taken possession of an Osmanthus about 1½ feet high, and which it completely covered and spread itself out into a patch quite a yard across. Thus it became a mound of pure white delightful to see. Amongst the Campanulae, *Edraianthus dimaricus* was beautiful, a crowded mass of soft blue about 9 inches over. The *Edraianthus* are charming plants, and it is a pity that their season is so short. *Enothera ovata* was another beauty, a stemless species in habit like a Primrose and producing its clear yellow flowers in the same way. *Dodecatheon media alba major* was a very fine thing, the scapes being nearly 2 feet high, flowers of the

largest size, very numerous and pure in colour. *Bellis sylvestris aucubaeifolia* is quite distinct, the leaves having numerous yellow spots. As this is evergreen, it is capable of affording a pretty bit of effect at a time when there are no flowers. *Funkia lancifolia albiflora* is quite a charming thing, with flowers of the purest white, and being quite hardy anywhere is an acquisition. The only pure white-flowered *Funkia* (*F. grandiflora*) is only hardy enough to flower in a few places.

Noury.

T. SMITH.

#### JANUARY IN SOUTH DEVON.

1895 has commenced its reign rigorously, the mean temperature of January having been 4° colder than the average for the last sixteen years. On twenty-four out of the thirty-one days did the mercury fall below freezing point. The lowest reading on the grass at the usual reporting station was 18.4°, but in one low and damp garden the thermometer showed 17° of frost. In spite of the cold, the sun has shown itself more than is its wont in January, 89 hrs. 45 min. of sunshine having been recorded against an average of 70 hrs. 50 min., and a record of 64 hrs. 55 min. for January, 1894.

The rainfall has been slightly in excess of the average, the latter being 3.40 inches, while 4.10 inches with twenty wet days, against 4.49 inches with twenty-six wet days for January, 1894, have been registered.

Of the last twelve months, January, 1895, has, with the exception of its immediate predecessor, December, been the most windy, 7551 miles of lateral movement having been recorded, the greatest velocity being attained by the wind on the 24th, when between 11 a.m. and noon the rate of thirty-four miles per hour was reached.

In the early part of the month the winds were for a few days at rest, and an end was set to a period of unseasonable warmth. At noon the pale winter sunlight failed to warm the frosty air. At eventide the heavens crimsoned in the west, and headlands stood out in deep purple from the haze that hid the sea, and with the crimsoning the cold strengthened. At night, when the "goddess, excellently bright," looked down from her silver crescent, a still more penetrating chill seemed to shiver from the frigid skies. These clear, hard days and silent nights proved but a prelude to weather that can but merit the term of abominable. The wind—the black north-easter that Kingsley, lover of flowers that he was, had the bad taste to greet with an ode of adulation—swept down upon us, the skies were full of snow clouds, and the ground soon white with the thickly-falling flakes. When the white carpet was 2 inches thick, the fall changed to rain, and on the heels of the rain came a hard frost, since when the earth has been encased in sheet-ice.

It is pitiable to note, in walking round the garden, the vegetable world in its extremity. Our humble friends the Wallflowers and Forget-me-nots seem to have not a particle of sap left in their limp leaves.

Long fingers of ice fringe the trailing branches of the *Muhlenbeckias* that hang at the side of the swollen cascade, while the dead leaves of the yellow Water Flag at its base are cased in solid crystal by continued sprinklings. *Veronicas* appear in sorry plight, as do many of the *Dracenas*, and the continuance of easterly gales has harmed the *Bamboos* more than has the frost. A *Crocus* or two and a few *Snowdrops* or a venturesome *Violet* from sheltered corners, a scarlet-blossomed spray of *Pyrus japonica* have been almost the extent of January's offer-







ings. The Christmas Roses have bowed their heads to the frost. The early Anemone shrivelled ere it opened, and the ruby and cream of the Safrano buds turned to black. It is the "winter of our discontent."

S. W. F.

## GARDEN FLORA.

## PLATE 1002.

## SAINTPAULIA IONANTHA.

(WITH A COLOURED PLATE.\*)

FEW plants introduced of recent years seem likely to become more popular than the Saintpaulia which is shown in the accompanying plate. We remember that it was well shown at the last Ghent exhibition, where it was exhibited by Messrs. Linden, of Brussels. As will be seen from our illustration, the Saintpaulia, which represents a new genus, is much like the *Ramondia* in general aspect, and came to us from the Usambara Mountains, in Central Africa, being discovered by St. Paul-Ilhaire, the governor of Usambara, hence the generic name. The plant makes quite a tufted growth, with firm-textured leaves, hairy and of oblong form, whilst the rich violet-purple flowers are about 3 inches across. The plant when well grown is in bloom for months together, and is raised from seed, which should be treated similarly to that of the *Streptocarpus*. It is very fine and must be sown carefully. A warm greenhouse will grow the Saintpaulia well. Another way of propagating it is by division of the leaves, only a bulb is not formed, but fibrous roots.

## THE WEEK'S WORK.

## KITCHEN GARDEN.

**SUCCESSIONAL TOMATOES.**—The present is a good time to sow seed of Ham Green, Perfection, Challenger, or some equally prolific sort that will be ready for putting into their fruiting pots at the end of April. These, if grown on from the very first in an intermediate temperature, will produce ripe fruit in July and supplement those produced by the January-sown plants. If at the final potting a few of the smallest are put into pots one size less, they will come in most useful for planting along the back walls of warm Peach houses or orchard houses where there is plenty of light and air. These, by reason of having a more extended root run, may be trained with three separate main shoots, and, if judiciously fed when the crop is set, will continue to yield for several months. Where the roots of old Peach trees are a barrier to planting out the Tomatoes, they may be planted in Orange boxes, two plants in each box and mulched when the crop tells on their energies. Young seedling Tomatoes should never be syringed overhead, as it predisposes them to mildew and other diseases.

**EARLY VEGETABLE MARROWS.**—If an early supply of this esteemed vegetable is needed, seed may now be sown. These, if planted out in heated pits or in frames on fermenting material about the second week in April and the growths well thinned, will supply good Marrows in June. I advise sowing the seed in separate pots of small size, as, like Cucumbers, they do not care to have their roots mutilated. Time is also saved by this system. Moore's Cream and Pen-y-byd are the two most suitable varieties for early work, setting

\* Drawn for THE GARDEN by H. G. Moon in the Royal Gardens, Kew. Lithographed and printed by Guillaume Severeys.

well. A temperature of 60° is one most suitable to raise the plants in, and if a little bottom heat is at command so much the better. As soon as germinated raise the seedlings near to the roof glass and support with neat sticks as soon as the first rough leaves are formed, or being top-heavy they soon fall about and the stems get ruptured at the base. Early Vegetable Marrows also do well in large pots if placed in light positions in a comfortable temperature and trained round stakes or to wires fixed to the roof or front lights. Good loam mixed with a fourth part horse droppings and a little road grit is the best medium for the plants to root in.

**POTATOES IN FRAMES.**—January-planted tubers, especially if previously sprouted in warmth, will now be well above the soil and will require very careful treatment. Even where a fair amount of heat has been maintained in the interior by means of massive manure linings the haulm is somewhat yellow and drawn by reason of continuous coverings. As soon as the sun strikes the frames the mats and litter must be removed, but air withheld until about 11 a.m., a chink only then being given. This should be withdrawn at 1 or 2 o'clock and the top coverings again replaced so as to prevent the escape of sun-heat. Of course, if frost is absent the lights must be uncovered at daybreak and not again matted down till dusk. As a rule, there is not too much head room for growth in frames containing the earliest crops and only a limited amount of soil in consequence, and as earthing up in the ordinary way would be likely to lay the roots and young tubers bare, the best plan is to prepare a quantity of fine loamy soil, warm it, and slightly mound up with this. I am opposed to much earthing up, as it prevents the ingress of warmth and greatly lessens the yield. By this time the soil in Potato pits heated with hot water will be dry, especially round the sides close to the pipes. In such cases the middle of a sunny day should be chosen to give water, this being nicely chilled previously.

**SUCCESSIONAL BEDS.**—It is now quite time that a good spacious bed of leaves or leaves and litter was made up for bringing on the second lot of early Potatoes. This need not be of such depth as the preceding one, as sun-heat will soon greatly assist growth. Where the soil intended to supply these frames is still in a frozen state it must be wheeled into a stovehole or other warm building to thaw, as if left in the open air a fortnight or more may be lost. Fresh soil is not necessary, that used last season answering well if a fair sprinkling of some good artificial manure is added to it. For frame work at this season I find Puritan and Sutton's Seedling capital varieties. They are certainly of rather tall growth, but if a little of the material is taken from the insides of the frames before the soil is thrown in more head-room will be afforded, and the growth can be pinched before it touches the glass. As this batch will want plenty of room, an opportunity will be afforded of sowing Radishes between the rows, these being fit for pulling before the Potato haulm shades them too much. A couple of the strongest shoots will be ample to leave to each tuber, dense growth in frames being ruinous. Some of the more advanced tubers of early sorts may now be removed from the store room and placed in a warm greenhouse ready for planting in cold pits or rough home-made frames in March. These will afford new Potatoes several weeks in advance of the earliest planted on warm borders in the open air. Snowdrop comes on quickly and yields well under cool frame treatment, I myself having grown it in such a position the last two years.

**SECOND EARLY PEAS.**—With the hope that snow and frost will soon come to an end for this season, means should be adopted for getting the ground intended for second early crops into condition as soon as possible. Any south borders or sheltered nooks should be cleared of snow on the least indication of a thaw. This is a great gain, as if it is allowed to melt and sink into the ground it is rendered cold, and early root action becomes impossible. I have frequently advised sowing Peas on shallow ridges, particularly where the soil is

not of the lightest and drainage perfect. This will be especially beneficial this season, and as there is extra moisture in the ground, dryness at the roots before the crop is gathered need not be apprehended. The ridge system is more important in the case of the wrinkled Marrow section than with the round-seeded, the latter not being so liable to rot. Where ground is scarce it is well to sow an equal quantity of first and second early Peas in the same rows, not drawing drills in the usual way, but raking out cavities with the spade 9 inches in width, and sowing the seed thinly. Those who did not sow last autumn, or who have not raised a batch of early Peas in pots or boxes, will this season find the disadvantage of trusting to open-air sowings for the first supply. Peas in small pots sown in January and which have been in a cooler house for some time past should now be removed to a cold frame to harden off preparatory to planting them in their permanent quarters in March. Care must be taken not to give them too much water, particularly for the first fortnight, or it may cause the growth to turn yellow and fail. They must be protected by means of fish netting even if the lights are only tilted, as sparrows will find an entrance and quickly spoil the lot.

**EARLY TURNIPS.**—These do well in moderate heat, and well repay the trouble of culture. If a bed of good depth of leaves is made up to accommodate either a single or double frame, this being furnished with from 6 inches to 9 inches of light loamy soil and the seed sown thinly in shallow drills 9 inches apart, it will quickly germinate. When the seedlings can be handled they must be freely thinned, as crowding soon ruins young Turnips. A second thinning must follow when the rough leaves are formed, finally leaving the plants 8 inches apart. Abundance of air must regularly be given, avoiding draughts and cutting winds, and liberal waterings administered, as Turnips delight in plenty of moisture. For this reason it is advisable to grow them on flat beds rather than sloping ones. Sown now they will be fit for use in May. The best variety for the purpose is Early Milan.

**EARLY PARSNIPS.**—This nutritious vegetable does not always receive the attention it deserves. The sooner the seed is sown the better, providing the ground is in workable condition. Scuffling with five-tined forks so as to aerate and sweeten the surface is very beneficial where the soil is not of the lightest. If a few rows are sown at the end of the month, the roots will be ready for lifting in September. Deep tilth, freedom from stones and lumps of soil to the depth of 1 foot or 15 inches are imperative if clean-grown roots are desired. Parsnips should also follow some other crop, and not be specially manured for, or coarseness and rust are sure to follow. Sow the seed in shallow drills about 18 inches apart, and as soon as the plants are large enough to handle thin moderately to prevent drawing. Where extra large roots are desired for exhibition, plenty of room must be allowed between the plants, those at the final thinning being left 1 foot from each other in the rows. On very shallow soils the ridge system may be practised; this increases the depth of soil for the roots to work in, and also tends to keep the young roots warmer till growth is vigorous. Where the soil is unfit for growing Parsnips holes may be made with a crowbar, these being filled up with light friable soil. In this case the rows may be about 18 inches apart, and the holes about 1 foot apart. For first sowings the old hollow crowned variety is hard to beat.

**EARLY OPEN-AIR CARROTS.**—If possible a little seed of Early French Horn and Early Nantes should be sown before the end of the month, and if a slightly raised bed in a sheltered position was prepared as advised some weeks ago, setting will by now be completed, and a little surface stirring and exposure to sun heat will render it fit for the reception of the seed. After sowing, frost may be kept at bay by covering with dry litter at night-fall when frost threatens, removing the same early next morning. A little wood ashes strewn along

the drills after sowing is a good preventive against grubs and other insects.

**SMALL SEEDS.**—Such things as the forcing Cauliflowers or Red Cabbage Lettuce sown in heat some time since must receive attention in the matter of thinning and hardening off. Remove the boxes or frames to a warm greenhouse, elevating them well up to the roof glass, water carefully, and sprinkle with wood ashes on the first appearance of damp.

J. CRAWFORD.

### FRUIT HOUSES.

**EARLY VINES.**—With the outside temperature lower than we have experienced for years it is difficult to maintain a sufficient temperature without a drying heat, the latter encouraging thrips and red spider. Those who have small sheltered houses will reap much advantage over those with larger ones, as in these latter it is more difficult to maintain a genial atmosphere. Much may be done at such seasons by covering the outside glass with a warm cover; indeed, only a slight cover of any kind is beneficial, as it breaks the force of cutting winds and prevents the hard firing so harmful to Vines. If the advice given in former calendar notes has been carried out, the Vines will be making good progress, and if in pots near hot-water pipes with hard firing more moisture will be required at the roots. If allowed to dry there will be trouble in the way of bad setting and other evils. All parts of the house should be freely damped over, except the Vines and hot-water pipes, as volumes of steam are most injurious to the tender foliage. There should be no delay in removal of superfluous bunches with such varieties as Black Hamburgh, as these rarely fail to set well, whilst the shoots or growth should be stopped at the second joint beyond the bunch, also the lateral growths as they push out at the first leaf, but this advice may be modified should the canes have broken unevenly. In some cases it may be well to leave a greater length of wood from the bunch or later lateral growth to tie in bare places. With pot Vines it is also necessary to throw all the vigour possible into the bunches, so that it is not wise to allow too much growth. The leading lateral growth may be allowed to run freely with planted canes, as if there be room this will cause a free root growth, but should the lower growths be at all weak it is advisable to stop them two or three times during the formation of the bunches and swelling of the fruit. After the bunches are set, if the Vines are in pots some rich surface-dressing should be given in the way of Thomson's Vine manure mixed with good loam, and at every other watering tepid liquid manure may be given. Vines planted out will take liberal supplies if the borders are shallow and well drained. Thinning should be done as early as possible to promote the swelling of the berries left on the Vines, as these latter when they take the lead grow rapidly. Temperatures in such seasons as this should be low than otherwise, 60° to 65° at night being ample, with a rise to 70° by fire heat by day and a liberal rise by sun-heat. Ventilation will be difficult, though there be bright sunshine, and admit air in small quantities through the front ventilators, as then it can be warmed by passing over the hot-water pipes, and with bright sunshine with a chink on the top ventilators there will be no danger.

**SUCCESSION VINERIES.**—The Vines started early in the year will have broken freely, and in most cases syringing should cease. There is much gain in having a thick covering of fermenting material on the borders, as this greatly assists the Vines, and with those started early this month it may be well to add a little fresh manure to that which has got exhausted. This will assist the buds to develop and save much time in syringing and fire-heat, and as the bunches show reduce them to the most shapely. Where high finish—not mere size of bunch or weight of fruit—is wanted, cut away freely. Great care will be required in tying down the lateral growth: indeed, there should be no hurry if the wires are a good distance from the glass. Unfortunately, in many houses they are

close, and in such cases the rods may be given more play, and only those growths gone over daily and slightly lowered which touch the glass. The same remarks as to extension of lateral growth advised for early Vines apply here, but more forcibly, as with later houses more space can be spared for extension and encouragement of free root growth. High temperatures also mean a weakly growth, especially at night. In severe weather 55° will be sufficiently high, even up to the flowering period, when the temperature should be raised 5 to 7, or a trifle more for Muscats. In mild weather 60° at night is none too high for Vines, but my remarks apply to such weather as we are having at the time these notes are written. As the sun gets more power it will be an advantage to allow the thermometer to run up to 80° or 90°, and during such admit air, closing always before 1 p.m. and keeping the fires quiet from 9 p.m. to closing time. Without sun-heat the day temperature may safely range 10° more than that advised during the night. Well water all inside borders before the flowering period, as it is best to do this to enable them to tide over that time. During dull sunless weather less atmospheric moisture must be given and the rods gently tapped to distribute the pollen. Avoid draughts of any kind, give air sparingly, and in the case of shy setting kinds such as Muscats, Alnwick Seedling and some of the large-berried varieties fertilise at mid-day with a rabbit or hare's tail or camel's-hair brush. I prefer the former, using the pollen of the Black Hamburgh, of which there is always abundance.

**LATE VINERIES.**—The cleansing of these houses should now be finished, and the borders, if inside, given a thorough soaking of rain water, also any top-dressing required attended to. Use good turfy loam with a liberal proportion of Thomson's manure for the Vines. In many cases top-dressings may be useless through the roots being so low down. In such cases remove a large portion of the top inert soil and place the new richer material directly over the roots. If the Vines are deficient of roots, they may be much improved by placing some warm litter over the surface after the top-dressing when the house is started. With warmth as advised, new roots will be formed in the new surface dressing, and these may be fed during the season. With the borders in the open it is well to do this work a few weeks later, as the Vines do not push out new roots until the buds are breaking freely. If the work be done just before that time the soil is warmer, though it is well to encourage new root action by covering the surface with warm litter for a few weeks. With regard to starting late Vines much depends upon the varieties. Start Muscats and Gros Colman early in March, as by so doing there will be less need of fire-heat at the finish. The fruit hangs better and is superior in every way. With Black Hamburgh there may be a few weeks' delay.

**POT VINES FOR NEXT SEASON.**—These are secured from Vines struck last season. Few can grow their canes sufficiently strong in one year to fruit very early the next. There is not time to mature the canes for hard forcing. For this purpose the young canes should have been cut down at the end of the year, and now be in a condition to report if the shoots are 2 inches or 3 inches long. I usually get my young canes the first season into 5-inch pots, and they are then large enough to place in their fruiting pots direct, and will have been started for this purpose in a vinery a few weeks ago. When repotting remove all loose soil and drainage, loosening all long roots, and repot in good turfy loam, a little old mortar rubble or wood ashes and a sprinkling of bone meal. Have clean pots and ample drainage. Pot firmly, leaving at least 2 inches of space on the surface for watering. If the plants are small, pot into 8-inch pots after shaking out, and when the new roots are all round the ball, shift into the pots in which they are to fruit. If bottom-heat can be given so much the better to start the plants, but let it be as mild as possible. Water very sparingly, giving tepid water when required, and as top-growth in-

creases they should be tied up near the light to encourage a sturdy growth. I omitted to state that in potting keep the old ball well down so that the shoot from the base is close to the soil, as this will induce new roots to form from the base of the new growth. For fruiting canes a portion of ½-inch bones may be used on the rough drainage. Those who must grow their own canes will have saved their best prunings. These should have been prepared a month ago for the production of strong canes. If not yet done no time should be lost. I prefer to place the cuttings after potting up in a frame or cool place for a few weeks, and then plunge in a steady bottom-heat of 80°. They then rapidly make roots; whereas if placed direct in strong heat before the cut portion is callused over they make top-growth in advance of the roots, being weak and rarely making good plants. After placing in heat moisture must be given very sparingly at the roots, damping the tops over with tepid water occasionally.

**CHERRIES UNDER GLASS.**—The Cherry will not bear hard forcing, and requires much care in the earlier stages. When fire-heat is applied there should be no lack of air. Many who only have one house start their trees at this date, and with gentle forcing get fine fruit of splendid flavour. As the Cherry can be grown so well in narrow houses or cases, it well repays for the space occupied. If trained to a back wall the trees fruit grandly. A Cherry house may also be used for so many purposes after the crop is cleared, that I wonder more trees are not grown under glass. The best Strawberries I ever forced were in Cherry cases, with a shelf suspended from the roof, this treatment just suiting the plants. The house should be started at 45° to 50° at night, with an increase of 10° by day, but in severe weather I would advise the minimum, as it should be the aim of the cultivator to force slowly, thus obtaining strong bloom, otherwise much of the bloom will fail to set, or will drop as soon as a set is secured. In the case of Cherries it is not well to allow the house to get as hot as advised for Vines. With more warmth give air freely and do not let the trees suffer for want of moisture, the syringe being used early in the day and at closing time. It is best to give the borders a good watering before the bloom opens, and should there be the least trace of green-fly, fumigate lightly two or three nights in succession before the flowers open and the trees are dry. When in bloom the temperature may be raised, allowing 5° by night and 10° by sun heat, and in dull weather it is well to fertilise the bloom at mid-day or when the pollen is ripe or dry. Trees in pots in cool or orchard houses should be placed in the cool end of the house, and at the start give plenty of air, but they will require careful watering. The buds drop badly if there be excess or otherwise. It is best to give both pot and planted-out trees a thorough soaking when required. It is when the surface is only just moistened that buds drop. G. WYTHES.

**A useful climber.**—One of the very best and most attractive climbers for the conservatory is *Hibbertia dentata*. A very small plant soon covers a large space, its glossy leaves and delicate yellow flowers being very ornamental at this season of the year. No better subject could be chosen for covering walls in conservatories or carriage courts, owing to its evergreen nature. It succeeds well in a mixture of loam and peat, with sufficient rough sand to keep it open. Being a vigorous rooter it requires a good quantity of water during the summer months, and during winter must be kept in a fairly moist condition. It requires a trellis to support it, and the young lateral growths should be allowed to hang loosely and not be tied in formally.—J. C.

**Rubus australis.**—It may be of interest to Mr. W. J. Bean, who writes concerning the above plant at p. 109, to know that so far north as Chester a plant of this *Rubus* which had remained exposed for several years survived the severity of the winter of 1879-80 with no protection of any kind. It will be remembered that this winter

was unusually severe, the thermometer in some instances falling nearly to zero. If I remember rightly, 28° was the maximum registered by the writer, but the frost was sufficiently prolonged to kill outright some 2000 plants of hybrid Pentstemons in a cold house, not a single plant escaping. Yet, notwithstanding, a dense impenetrable bush of this *Rubus* was only injured at the points and browned more or less. The plant was in an open bed in a mixture of peat and vegetable soil. When planting it in the open it is a good plan to place a few thin pieces of sandstone about the collar of the plant. This in times of severity will stand the plant in good stead, or if planted on the rockery against the sloping side of a sandstone block its roots will descend deeply and the *Rubus* receive protection therefrom. I have never seen it in flower.—E. J.

## ROSE GARDEN.

### WINTER ROSES.

THE remarks of "D. T. F." at page 83 are worthy of consideration by Rose growers, as the question is introduced whether the British grower can compete with the growers in the south of France. "D. T. F." says, "Surely it is not beyond the ability of the English growers to flood the markets with home-grown Roses for Christmas," &c. Flooding the markets with white Roses at Christmas is a large order, but it would not be beyond the reach of British talent or British money. The all-important question is, would it pay? It would if a good price could be obtained in the wholesale market for the Roses, but in the present state of the trade it would, I fancy, be spending half-a-crown to earn a shilling. Whether the Roses are grown in pots or planted out, they require attention, and must be under the care of gardeners who know how to force flowers. Suppose they are grown in pots, as being the most convenient. They must be prepared for forcing during the summer, and to do Tea Roses in pots well, they ought not to be outside at all. They must rest after flowering, and as the flowers are cut about Christmas, it would not do to turn them out of doors, nor yet to thrust them into any out-of-the-way corner under glass. They must be exposed to light and air in a good position in the houses during the spring months. The plants will make some good growth and flower again in summer if allowed to do so. Repotting must be attended to annually, and not the least part of the cultivator's care is to keep the leaves free from insects and mildew. In fact, to keep Roses up to the high standard of excellence whereby good flowers only can be produced requires as much labour as is necessary to grow greenhouse or stove plants. Let us look at the comparative case with which Roses are grown in the south of France and the Genoese Riviera. There is scarcely any rainfall from the end of April to the end of September. The Roses during those months almost cease to grow and lose their leaves. In August the gardeners prune their Roses, or in the first fortnight of September at the latest. They begin to bloom late in October, and continue flowering until the middle of January. The three principal Tea Roses grown are Safrano, Mme. Falcot, and Lamarque. They are cut in the bud state, and open out when placed in water. The Roses produce immense quantities of bloom; whereas Roses in pots forced early would not produce many. Good sized Rose bushes in 8½-inch pots would not produce on an average a dozen blooms, if so many; probably nine would be nearer the average, and as the flower girls offer them in November and December in the streets at a penny apiece, one may have

some idea of the wholesale price. It will never be worth while to flood the markets with English grown Rose blooms in winter, either of *Niphetos* or any others. Nearly all the English cultivators of Rose blooms for market know the value of *Niphetos* for cutting. It is more grown than any other Rose, except, perhaps, *Maréchal Niel*.

The culture of Tea Roses in private gardens is another thing, and strongly to be commended. I cut some beautiful Tea Roses this morning, and hope to continue cutting them until Roses come in again out-of-doors. I do not try to get them in before Christmas, as it does not seem to be worth while to compete with the *Chrysanthemums*, but those who want Roses in November and December must imitate to a certain extent the climate of the Genoese Riviera. Let the Roses rest by being kept comparatively dry at the roots during summer. Prune them about the end of August to the end of September, and start them growing in an ordinary greenhouse. They require no artificial heat until the end of October, and a temperature of 55° as a minimum will be sufficient for them during the months of November and December. This is easily kept up with a dryish atmosphere, as zonal *Pelargoniums*, *Carnations*, *Bonvardias*, and *Cyclamens* will thrive well under the same treatment. It is easy to see what a beautiful show of bloom may be kept up during those dull and dreary months of the year.

J. DOUGLAS.

### NEW ROSES OF 1893-1894.

THERE were a fair number of new Roses sent out in the above years, and if not so numerous as in the past—for which I believe all of us have little regret—a few really good ones may well be mentioned before the planting season is over. With the prospect of many gaps in our Rose borders and the fact that most of these new kinds can be obtained in pots better than from the nursery rows in the ordinary way, I thought a description of them might be useful.

CLIO was sent out by Messrs. W. Paul and Son last year. I have seen this Rose in superb form at the Temple shows of the R.H.S. A beautifully delicate flesh colour, with a shade of rosy-pink in the centre, excellent shape, full, and with some of the handsomest foliage we have, it is, perhaps, one of the most distinct Roses recently introduced, and for pot work cannot be surpassed in its colour.

CLARA WATSON comes from Oxford and has been well shown again during the past summer—a Hybrid Tea of promise, more especially for cutting from in the garden. It is a beautifully tinted salmon and pink, being much brighter and fresher in the centre, very free blooming and vigorous, but is rather more subject to mildew than the majority of Roses.

CAPTAIN HAYWARD is another good Rose for garden decoration, and is sometimes double enough for the exhibition stand. The petals are very long, and as a bud its deep carmine-crimson is most taking.

CORINNA is an almost indescribable colour—rose, bronze and a coppery flesh combined. The flowers are large and freely produced, while we can wish for no better grower than this production from Waltham Cross.

CRIMSON RAMBLER need not be described, and yet there may perchance be one or two who have not purchased it. For a pillar, a wall (inside or out), in fact for any position where the Rose can be grown, this charming new Polyantha cannot be misplaced. Its tremendous growth rivals, if it does not surpass, that of *Rôve d'Or*. Its huge trusses of carmine blossoms are simply superb.

CHARLES GATEK is a very deep crimson, of immense size and substance, about midway between a clear crimson and maroon, each of these two shades being distinguishable in different lights.

COMTESSE DE GALARD-BEARN was sent out by Bernaix last season and is one of the Mme. Carnot and W. A. Richardson class, but larger and fuller, and of a bright canary-yellow shade.

ALISTER STELLA GRAY—originated in that famous Rose garden at Bath—is a tremendous grower, particularly free-blooming, and reminds one of a cross between *Perle d'Or* and W. A. Richardson. The trusses of small blossoms are delightfully distinct, and so freely borne that one can truly cut and come again.

BEAUTE INCONSTANTE is well named. Carmine, yellow and coppery fawn are all present in some flowers. We may see any two of these, or occasionally only one. It is not a very strong grower, but well worth growing if only for its delightful buds.

BRIDESMAID, another sport from Catherine Mermet, is identical with that except in colour, which is much deeper and may be described as a clearer as well as a brighter pink. It is an improved C. Mermet in colour with every other good quality of this grand Rose.

BELLE SIEBKRECHT many of us saw when so well shown by its raisers. It won the gold medal of its year, and from the ground plants shown me one can judge of its growth. I was much taken with it upon more than one occasion while exhibited under the name of Mrs. W. J. Grant, but the entire stock passed into American hands, and they have failed to send it out at the date advertised. We may look for it this spring. It is a hybrid Tea of bright rosy-pink shade, a free bloomer and sweetly scented.

CELESTIN PORT is one of the most peculiar shaded H.P.'s we have, as the centre is distinctly tinged with that coppery red found in many Teas. Vermilion and shaded crimson of a velvety hue are the remaining colours. It is large and of good shape.

DIKE OF YORK, a China Rose from Messrs. W. Paul and Son, is most variable in colour, sometimes tipped with rosy pink on a white ground, and at others rosy pink only, while I have seen these two shades in many combinations. Good for the garden or post.

GRAZIELLA we already had twice among Roses, but this novelty of 1894 is a very promising Rose and quite distinct. A creamy white with tints of clear flesh, a good grower, and one I quite expect to become very popular.

GERMAINE TROCHON is another of those delightful Hybrid Teas from Pernet-Ducher. The edges are rose, ground colour salmony flesh, and centre clear nankeen-yellow.

LORNA DOONE, one of the small class of Bourbons, is a decided addition in every way. A deep magenta with carmine and scarlet shadings. Full, large, a good grower and free bloomer.

MME. JOSEPH COMBET, a free growing Hybrid Tea, is full of promise. A delicate creamy white shaded with rose, and the bloom rather larger than the majority of this new class.

MME. E. HELFENHEIN is described by Guillot as chamois yellow, with shades and veins of carmine-rose and apricot; a vigorous grower and most distinct.

MAMAN COCHET, a peculiar shade of carmine mixed with yellow and salmon, is really a superb addition to our climbers.

MARCHIONESS OF DOWNSHIRE won the gold medal last year. It is the most distinct and beautiful satin pink with a soft rosy shading we have. Very large petals, a full flower of great size and good form. As seen at the Crystal Palace, where it won first prize for twelve of any new Rose, it was grand.

MARCHIONESS OF LONDONDERRY is a clear ivory white that also won a gold medal, which it well deserved. The substance of the petals is most remarkable, and it flowers well both on cut-backs and maidens.

MRS. SHARMAN CRAWFORD gives us quite a new shade of rosy pink and with a distinct shade of white at the base of each petal. It is large and of perfectly imbricated form, while its flowering and growth are excellent.

MRS. HARKNESS and PAUL'S EARLY BLUSH are now decided to be synonymous, a fact I was con-

vineed of from their first purchase. A pale blush sport of that delightfully sweet-scented and early blooming Rose Heinrich Schultheis.

MRS. W. C. WHITNEY we do not know much of, but it comes from America with a wonderful reputation as an extra free bloomer, long clear pink flowers, and sweetly perfumed.

PIERRE MERCADEUR is only a moderate grower, but it produces exceedingly large creamy yellow and copper shaded blooms.

PRINCESS MAY grows well, and is one of the most distinct Roses of the Gloire de Dijon class, but not so lengthy in habit. A pretty opaque pink flower of good shape.

If I had to choose half a dozen from these they would be Beauté Inconstante, Graziella, Crimson Rambler, Clio, Clara Watson, and Alister Stella Gray as being the most distinct, but Marchioness of Downshire and Mrs. S. Crawford are both excellent.

RIDGEWOOD.

#### NOTES ON ROSES.

DOUBTLESS the pages of THE GARDEN will soon be a guide as to the damage done among Roses by the severe frost of January and the present month. How many of us can look at our Roses now without despondency when we not only experience frosts of 20° to 25°, but also have most searching and frost-laden winds. In 1893 we had 29° early in February and 15° about the middle of the month. Not only was this considerably less than that prevailing while I write, but we were also without a keen wind. Those who make a practice of protecting no doubt feel safer than others who do not take this trouble. After all I think the results in spring from over-protection are almost as bad, but I am quite willing to admit that I should prefer my own protected from the terribly keen wind and frost now prevailing. Even the base of our plants and the dormant buds on dwarfs are more fully exposed than usual during an extra sharp frost, because in this locality we have scarcely any snow, not more than an inch. I fear that those who object to spring planting will find themselves forced to it this season if only to fill up blanks in those beds that were autumn planted. New beds can be made as soon as the frost is well out of the ground, but I shall be in no great hurry with our own, preferring to wait until the ground gets a little warmer. Plants in pots, such as grafted Teas and others that were not potted on or did not grow sufficiently strong to occupy 6-inch and 8-inch pots for this season's forcing, will be capital for filling in blanks. We usually store these in a wooden frame or pit, or stand them in a sheltered corner and then cover up, the object being to protect the wood both for late grafting and also so that the plants may come on well when potted up and started for making extra sized specimens in the coming year. This season, however, the bulk of these will be retained for filling the gaps it is quite certain we shall soon discover. Indeed, I see that several plants of Comtesse de Nadaillac are killed down to the ground line, and more mischief may be exposed later on.

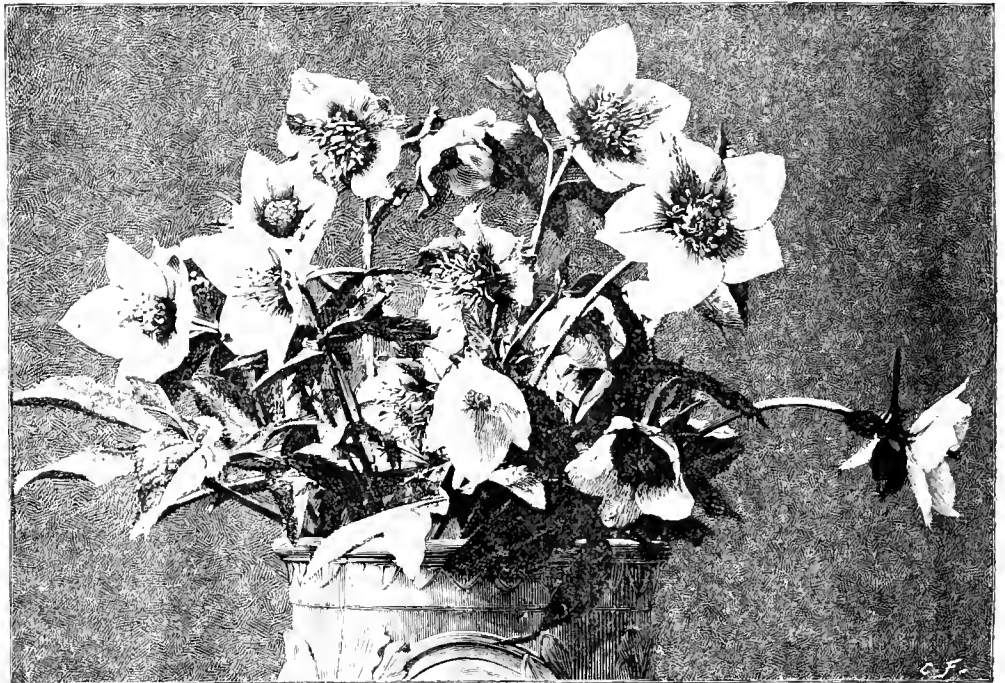
At this date I have more than once given a few notes on pruning, but this season it seems likely we shall need to prune all kinds alike by simply cutting away the dead wood. A friend of mine whose rosery is in a low and rather damp spot has often jocularly remarked that King Frost does all of his pruning. The other day he feared this exceptional weather had overdone it, and this more especially among the climbers and extra vigorous sorts of all

classes. Here is the very case where little pruning at this season is necessary, and the results are likely to be severely felt when our summer Roses should be in full bloom. Climbers and strong growers are so dependent upon such wood for their chief display, that we cannot look forward with any degree of confidence.

I had intended to note a few of the worst and a few of the least affected sorts in my collection, but, the frost showing no signs of abating, I will leave it awhile and look them over again. Nor can we possibly form an idea of much value until the frost is well gone and our plants once more try to make growth. We who leave them totally unprotected may have to moderate our ideas of the hardiness of Roses, but one consoling point in favour of our theory is that many, I fear very many, other recognised hardy plants will also succumb.

#### LENTEN ROSES AS CUT FLOWERS.

THE accompanying illustration shows the beauty of the Lenten Rose (*Helleborus orientalis*) when



Flowers of *Helleborus orientalis* in a vase. Engraved for THE GARDEN from a photograph sent by Mr. G. Ingram, Ascot.

arranged in a vase. There is great charm in these lovely spotted late-blooming Hellebores, the colours ranging from greenish white to deep purple rose with rich spottings of darker shades. It may not be generally known that Lenten as well as Christmas Roses will remain fresh in water for a considerable time longer than they otherwise would if the stems be slightly slit at the base for an inch or so upwards. We once thrust bits of pointed stick into the stems of some to add to their height, and were surprised to find that while these not so treated withered after a few days in the water, the others kept quite fresh, although all were in the same bowl, and on examining them we found that the stems had burst. This led us to think that the splitting of the stems allowed them to absorb an extra amount of water. On making further experiments we found that this held good not only with these plants, but also with many other fleshy-stemmed flowers. It often happens that

the stems split without the aid of the knife, but they will not do so if they are cut off quite close to the base.

## ORCHIDS.

### PHAIUS.

THESE are very useful Orchids, many of them thriving in structures devoted to the culture of ordinary stove plants quite as well as in the Orchid house. They are mostly of an ornamental habit, and if in good condition bear fine foliage and large handsome racemes of flower. While growing freely they require for the most part an abundance of heat and moisture, the roots also being kept well supplied. After the pseudo-bulbs are fully matured, the plants must be kept nearly dry in a cooler house until they show signs of breaking into growth, when they should be repotted and again introduced to the stove temperature. They must be grown in fairly large pots in a much more substantial

compost than most Orchids require. Sound fibry loam enriched with a little dried cow manure or some other fertiliser, chopped Sphagnum, a little leaf-mould, and nodules of charcoal or potsherds will be suitable for the strongest growers, as *P. grandifolius*, while for *P. tuberosus* the loam and manure must be left out and peat fibre substituted. The leaves of Phaius are very subject to insect attacks, thrips, red spider, and scale all being extremely troublesome if not kept well in check. Green-fly, too, is an inveterate enemy, appearing yearly upon the spikes when forming, and if not removed soon spoiling them. If the plants are arranged so as the syringe can be freely used around them and over the foliage, this is comparatively easy, but otherwise there must be very frequent syringings and even fumigations in order to keep the plants clean. Propagation is easily effected by division of the pseudo-bulbs at potting time, *P. grandifolius*

being especially amenable to this treatment, throwing up a number of young shoots, any or all of which will if carefully treated make young plants.

*P. BICOLOR* is a native of Ceylon, whence it was introduced in 1837. It is a large-growing species, with narrowish leaves 18 inches in length and large roundish pseudo-bulbs. From the bases of these the flower-spikes spring, and often attain a height of 3 feet. The blossoms are produced successively along the spikes, so that they last a long while in beauty. These are about 4 inches across, varying in colour, but usually some shade of reddish brown. The lip is yellowish in front with a rosy margin, the enfolding lobes being bright rose.

*P. BLUMI* is a fine handsome species, with broadly lanceolate leaves and short, roundish pseudo-bulbs occurring upon the creeping rhizome. The spikes rise to a height of about 3 feet, and bear upon the upper portion many flowers, individually about 3½ inches across. The sepals and petals are brownish or green and the lip yellow, with a large crimson spot under the column. This kind flowers in spring and has several varieties, including Bernaysi, which is lighter in colour than the type, and occasionally classed as a separate species. This comes from Australia, the type being a native of Java. Other varieties are assamica and Sanderiana, both natives of Assam. The well-known

*P. GRANDIFOLIUS* is one of the oldest Orchids in cultivation, having been introduced 100 years ago. It is said to be a common plant in the East Indian and Australasian islands, and also the mainland of China. The flower-spikes are produced from the base of the large leafy pseudo-bulbs, and attain a height of about 3 feet, producing many flowers. These are silvery white outside, chocolate-brown inside the sepals. The lip is white, with a yellow throat, shaded and veined with crimson. It is easily grown, seldom out of health, and flowers from midwinter onwards to the end of April.

*P. HUMBLI* is a rare and beautiful species, at present only represented in good collections. The sepals are narrower than the petals, pale rose, the lip deep rose, becoming nearly white under the column, where there are also two ridges or crests of yellow. This plant requires a strong heat, being found naturally in Madagascar.

*P. MACULATUS* is one of the very few Orchids which have finely variegated foliage, as well as attractive flowers, and which should be grown by everyone. The deep green lanceolate leaves are 4 inches across, thickly spotted with yellow. The flower-spikes grow about 2 feet high, and carry about a dozen flowers, each 2 inches across. These are yellow, with a reddish brown margin to the middle lobe of the lip. This species varies somewhat in colour, the brightest forms being very attractive. A native of Northern India.

*P. TUBERCULOSUS* is quite a distinct species from all the others, and a remarkably beautiful Orchid, which, unfortunately, is not always so happy under cultivation as could be wished. The sepals and petals are pure white, but the lip is the most attractive part of the flower; the upper lobes are canary-yellow, with a number of crimson spots, the front lobe roundish, crimped at the edge, white, spotted with purple and orange-yellow. This species must be planted in well-drained pots and watered freely while growing in the East India house. It must be shaded from bright sunshine and kept free from insects, or good results must not be looked for.

*P. WALLI* is similar in habit to *P. grandifolius*, and flowers at the same season. Like it, the flowers are white externally, yellow flushed with purple inside: the lip is pointed, yellow, with purple about the throat. The flower-spikes last a long while in perfection, and as they grow upwards of a yard in height, it makes a noble-looking plant. This species was introduced from India in 1837.

Besides the foregoing, this genus now contains several choice and rare hybrids, as *P. amabilis*,

raised by the Messrs. Veitch, *P. Cooksoni*, named in compliment to the raiser, *P. hybridus*, and the newer and beautiful *P. Owenianus*, exhibited by Messrs. Sander at the Temple show in 1894. H. R.

**Cypripedium barbatum Warnerianum.**—This species is no doubt one of the most popular kinds we have, having gained much popularity since the time of its introduction—over fifty years ago. The variety here referred to is unquestionably the most highly coloured of all and appears to flower earlier in the season than the typical form. I have recently seen several fine examples in bloom, the dorsal sepal in some instances being very highly coloured.—W. H. G.

**Angræcum fragrans.**—This is a plant that is rarely seen in our collections, although an old introduction. The flowers are borne singly, and each measure about 2 inches in diameter, are pure white, and, as the name implies, are very sweet scented. This also applies to the foliage, and it is stated that the leaves are largely used for imparting a delicious flavour and sweet aroma to ordinary tea when mixed with it; and, in fact, in Mauritius, its native country, a very agreeable preparation is said to be made entirely from the leaves of this plant. Being one of the few Orchids of commercial use, and not appearing to be very widely distributed over the globe, may probably account for its scarcity under cultivation.—G.

**Cypripedium Morganæ.**—This hybrid, although not new, is still one of the finest in the genus. It is remarkable for its perpetual blooming, especially in Messrs. Williams' nursery at Upper Holloway, where there is a good batch of this kind. It is just about fifteen years ago since it first made its appearance, having been raised by Mr. Seden in Messrs. Veitch's nursery at Chelsea between *C. Stonei* and *C. superbium*. This plant, although perfectly distinct, somewhat resembles the very rare *C. Stonei* platytanium, having fine large, spotted, and drooping petals, and the dorsal sepal also resembles that of *C. Stonei*. During the past year there have appeared one or two very beautiful and distinct crosses, with flowers partaking of the same form, but I do not think they are better than this fine kind.—W. H. G.

**Cattleya Percivaliana.**—Several fine forms of this delightful plant are to hand from "J. M." of Manchester, who states that he has had this species in flower in large numbers for the past three months. It is in most instances a very highly coloured *Cattleya*, and one that is exceedingly useful for filling an interval between the flowering of *C. labiata* and *C. Trianae*, but not grown so largely as many other kinds. During the last few years, however, it appears to have gained more favour, in spite of the bad reputation it received soon after its first introduction into this country. The flower labelled No. 1 is of fine form and very deep in colour, the bright crimson markings on the large lip being very rich. Nos. 2, 3, and 4 are also very fine, having lighter sepals and petals and the lip is very heavily frilled. No. 7 is sent under the name of *C. Percivaliana aurea*, and although contrasting greatly with the above, is by no means so showy, the lip being almost entirely orange-yellow and lighter towards the front. The remaining flowers represent good typical forms.—W. H. G.

**Odontoglossum nevadense.**—*O. nevadense* is a very beautiful species which resembles very much in habit and general appearance the more popular *O. crispum*, with which it should be grown. Compared with many other lovely kinds, the number of plants in cultivation is remarkably few, and from this one is apt to infer that this plant must be somewhat scarce in its native home. It is stated that the first consignment consisted only of about four plants, and the first of these to flower was in the celebrated collection of Mr. S. Mendel, of Manchester. No doubt if it was introduced in larger numbers it would speedily become one of our most popular kinds, for the colours of the flowers are very striking, the pure white of the lip forming a pleasing contrast to the dark-

coloured sepals and petals. This plant was originally introduced into European gardens about 1868, when it was sent from Venezuela to M. Linden, then at Ghent, by the well-known collector Gustav Wallis, and remained a very rare plant for a considerable time. Since then, however, it has been introduced in quantities from time to time by various firms, and even in these plants considerable variation of colour is exhibited. It produces a slender nodding scape measuring more than a foot in length, and which will sometimes carry upwards of a dozen fine flowers, individually about 3 inches in diameter. The sepals and petals are similar, spreading, plain, and nearly equal, the latter being rather narrower than the former. These are of a deep cinnamon-brown shade with a narrow border of yellow, and usually with a few longitudinal lines at the base and also one or two transverse bars of the same colour. The lip, however, is finely fringed and terminates in a sharp point, pure white, occasionally pale yellow, and having a few brown spots at the base. It is a very desirable species, well deserving a place in every collection.—W. H. G.

#### DENDROBIUM McCARTHIÆ.

ONE of the most beautiful species in this fine genus is *D. McCarthyæ*, and although somewhat more difficult to manage successfully than many other kinds, it certainly well repays for any little extra attention that may be bestowed upon it. Under cultivation this fine *Dendrobe* appears to bloom at various seasons of the year, although in its natural home the flowers are produced during the month of May, from which it derives its native name of "Mayflower." Coming from the hot climate of the Ceylon forests, it must consequently be placed in strong heat in our houses and suspended close to the glass, so that all the light possible may be obtained, especially during the dull winter months. As the bulbs become matured the plants should be given a slight rest, but I believe it is a mistake to keep these too dry at this period, for being a plant of very slender habit, it is almost sure to suffer if not slightly nourished. In many instances this is no doubt the cause of failure with the culture of this species. I have seen the best results produced by placing the plants in very small baskets or upon blocks of wood, with a very little material around the roots when grown in the former; this should be made very firm, and composed of good fibrous peat and chopped Sphagnum Moss, a little silver sand mixed in being an advantage. Like all other Orchids, it requires thorough drainage, for it enjoys plenty of water during the summer months, and this must not be allowed to remain around the roots, for when once the plant gets into a bad condition it very seldom recovers, or will take a considerable time to restore to health. Place it in fully exposed situations where it can enjoy plenty of sunshine, and shade only in the middle of the day when the sun is exceedingly hot. *D. McCarthyæ* was first discovered about forty years ago, when it was sent to the Royal Gardens, Kew, from Ceylon forests. It is found growing upon the trunks of trees, but even in a natural state it appears to be a short-lived plant, and it is reported to have become already exceedingly rare. It is a slender growing deciduous species with semi-pendulous pseudo-bulbs, which do not attain more than 18 inches to 20 inches in length. These are very distinct, being green, spotted with red, and somewhat swollen at the base. The flowers are produced in short pendulous racemes of about two and three together, and individually measure over 3 inches across. The sepals and petals are of a delicate shade of rosy pink, the lip being of the same colour at the upper portion, with a broad

zone of white between that and a blotch of deep purple at the base. These will continue in full perfection for several weeks, and are very attractive and distinct.

WM. HUGH GOWER.

#### **Cypripedium albo-purpureum superbum.**

—A bloom under this name comes from "N. J." It is certainly a very nice form of the typical plant. This is a hybrid of Veitchian origin between *C. Sehlmi* and *C. Dominii*, and first flowered about the year 1877. The variety *superbum* is not a novelty, I having noticed one several years ago even larger and finer coloured than the bloom to hand. Although the flowers do not catch last long in perfection, they are produced in quantity, and as soon as one is past another opens, until the long spike is quite exhausted.—W. H. G.

**Cool Orchids** (*Hallman, Kensington*).—My correspondent inquires for a list of some half dozen kinds of Orchids for a cool house, but as he does not mention the amount of heat usually maintained it is difficult to advise him, for "cool house" is indeed a very vague term. The following, however, are all very beautiful and desirable plants which succeed well under cool treatment, and for descriptions of which I must refer him to recent numbers of THE GARDEN, where they will be found to be fully described and their individual requirements stated. A good selection may be made from the undermentioned: *Lycaste Skinneri*, very useful for lasting a considerable time in perfection; *Odontoglossum crispum*, one of the finest for cutting; *O. Rossi*, very pretty and free-blooming; *Oncidium tigrinum*, very bright and effective; *Cypripedium insigne*, one of the best of the Lady's Slippers; *Masdevallias* in many varieties, *Disa grandiflora*, a brilliant kind, requiring quite cool treatment, and many others, which, if a small amount of heat can be commanded, will keep the house bright for many months.—W. H. G.

**Trichopilia suavis.**—I am in receipt of a few blooms of this old favourite from "W. M.," Norwich, and amongst them is the ephate variety named *alba*. This latter, however, is a poor flower compared to the typical form, but this is probably due to the state of the plant. I would advise my correspondent to take great care of this piece, for when it becomes stronger and better established the flowers should be equally as large as the others, which are very nicely spotted with light rose. This useful and free-flowering plant is of easy culture, and when in bloom gives out a very delightful fragrance, perfuming the whole house. It is a native of Costa Rica, and grows at considerable elevation upon the mountains. Under cultivation it should be grown in quite a cool temperature and kept almost dry whilst at rest. When repotting, care must be taken to raise the plants well up upon a cone-like mound, for the flower-spikes proceed from the base of the bulbs and hang over the sides of the pots or pans. If not able to have a free course, they will quickly commence to decay as soon as they appear should the water remain around them.—W. H. G.

**Saccolabium bellinum.**—This is a useful and pretty little species, and being of a dwarf habit and very free in producing its blooms finds especial favour with Orchid growers. It was introduced by Messrs. Low and Co. through their collector, Mr. Boxall, from Burmah, and its handsome flowers at once attracted attention. The plant does not attain more than a few inches in height, and the thick bilobed leaves generally measure 9 inches or 10 inches long; therefore it is a very suitable plant for establishments where space is limited. The flowers, although small, are produced in a crowded raceme and are borne on short pendent stems. The incurved sepals and petals are very similar, light yellow blotched with deep purple: the lip is white and with a few small spots of red. This little species is one of the most beautiful in the genus, and no doubt the best known of all the kinds belonging to this dwarf section. To grow this plant, strong heat and

plenty of moisture in the atmosphere are needed, as its native habitat is one of the hottest in the world.—W. H. G.

## KITCHEN GARDEN.

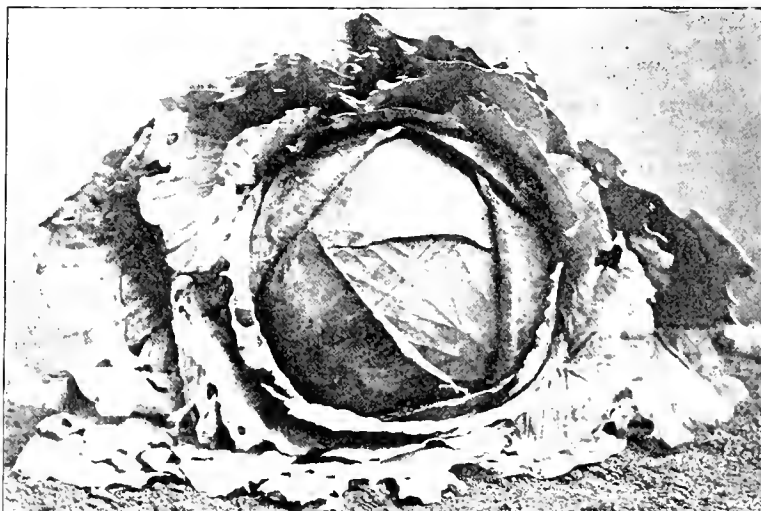
### PICKLING CABBAGES.

THESE are not grown in some gardens, as so few are required. The crop is often overlooked entirely, but in a garden of any size it is well to grow every kind of vegetable likely to be useful. There are only about half-a-dozen kinds, the one illustrated, namely, Blood Red, being one of the best, both as regards size, colour and quality. Some kinds have far too much thick stalk, but the one named above partakes of the character of the Drumhead or flat-headed type. It is also known under the name of Large Blood Red, and is grown in large quantities for the market. On the Continent the Red Cabbage is used in a variety of ways, but in this country its value is for pickling. The old Red Dutch is the variety grown in private gardens. It was largely planted in market gardens twenty years

should there be a failure of other kinds which require a longer time to mature.

I will conclude my selection of varieties with a very dark kind named Late Black or Superfine Black, but I do not recommend it in preference to those named above. Though darker in colour when pickled, it loses its colour quickly and is somewhat inferior in quality. There are other kinds, such as the new Garfield Pickler, an early red kind with a conical growth much resembling the well-known Cocoa-nut Cabbage. This when pickled is of a bright red colour and of excellent quality. It should be selected where quality is considered, and with pickling varieties colour is an important point.

As regards culture, so much depends upon the quality. If large heads are required, it is well to sow seed either the last week in July or the first week in August, but much depends upon the soil and locality. The ground should be well prepared for the seed bed, but as only a small quantity is often required, a space may often be given by the side of the other autumn or green varieties. Sow thinly to get sturdy plants. When the seedlings have attained a good size, plant out the end of September in rows at least 2 feet apart and 18 inches between



*Cabbage Blood Red Pickling.* From a photograph sent by Mr. Norman Blake, Bedford.

ago, but I prefer the one illustrated, as less of it is wasted when cut up for pickling.

The next large variety is Large Drumhead, which is a splendid market Cabbage for size and weight, but in quality is not equal to the kinds named, as in wet seasons on some soils it splits so quickly that it is unsaleable. It also gets of a greenish hue or bronzy green if grown in unsuitable soil. Sutton's Dwarf Red is quite distinct from the varieties named above, and is doubtless a choice selection, one of its parents being the one illustrated. It is a dwarfier grower, very solid, and one of the best for a private garden, owing to its delicate flavour. It is the earliest pickling Cabbage I have grown, which is a great gain where ground is scarce. I have obtained very fine heads from seed sown early in March, but, of course, if size be required it is best to sow seed in the autumn. The old Utrecht Red, a small, but very fine dark red variety, is much grown on the Continent. It is recommended for its good quality and value for spring sowing. Sow the seed in March, and pickling may be done late in July, so that it possesses great value as a catch crop

the plants. Cabbages of any kind are gross feeders, liking a rich, well-manured soil, as quick growth in the spring and summer are important. Plant, too, on land that has not borne a similar crop for some time, the ground being double dug or trenched and manured. Firm planting is essential to promote a dwarf stem, and in dry weather give ample supplies of moisture. Those who do not require size may sow seed in March, and they will get small compact heads. Much time, however, may be saved by sowing a pinch of seed in heat in a house or frame and pricking off when large enough into cold frames. Plant out in the middle of April, and this sowing will be weeks in advance of those sown in the open. For spring sowing select a form of the Dwarf Red or Utrecht type, as they come more quickly. To obtain size in either spring or autumn sown plants, the latter during the summer well repay for supplies of liquid manure or guano. G. WYTHES.

**New Onions.**—With the time for sowing close at hand the remarks of several correspondents as to the keeping properties of the various varieties

of Onions are exceedingly well timed. I had a couple of new varieties on trial last year, growing them under ordinary conditions with the old favourites that have served me well for several years—a good type of White Spanish, Giant Zittau, and Brown Globe. Taking them on the average, the novelties were in no way superior either in size or weight of bulb, and their keeping properties may be judged from the fact that it was found necessary to use them before White Spanish was touched. The few that remained had bolted some time before Christmas. As we know that most sorts can be grown to an exceptional size in rich ground and by the liberal use of stimulants, it would be interesting to know if bad keeping is the result of seed-saving from these giants, and if so, wherein lies the advantage of the system of such feeding. For the sake of having two and three-pound bulbs for the show table it is advisable to perpetuate a race that are past their best by the end of the year. In the matter of sowing indoors and transplanting instead of open-air sowing, which is recommended for the general crop as well as for the production of sensational bulbs, has it been proved that this treatment is instrumental in warding off the attack of the fly through the more advanced state of the grass? That the attack of the Onion fly is more a question of locality than of the absence of cultural skill is apparent from the fact that in two gardens almost side by side, where the treatment is identical, the one Onion bed shall be healthy and vigorous, the other almost a total failure.—E. B. C.

**Dwarf French Bean Mohawk.**—This is invaluable for raising in pots and planting out on a warm border sheltered with hand-glasses or frames. I prefer this to many of the others on account of its earliness. A few seasons ago I tried some half-dozen early kinds to test their early cropping character, and Mohawk, or Six Weeks, as it is often named, was six to ten days before any other variety. This variety is above the usual size, and the beans are speckled with purple, very fleshy, and the growth compact, whilst their quality is first-rate. For first sowing in the open I do not know of any better variety if size, earliness, and freedom of cropping be considered. There is often only a scanty supply of vegetables towards the end of May, especially of choice kinds, so that if a good supply of Beans can be obtained by sowing in 4½-inch pots early in March and planting out under hand-glasses when ready, there will be nice dishes at that date and early in June. If cold frames can be spared there is even less trouble in their culture, but I have obtained heavy crops by raising the plants in heat, transferring when above the soil to frames, and planting on a sloping border in front of warm fruit houses protected with spare frame lights, hand-glasses, and mats.—G. WYTHES.

**Veitch's Improved Long-pod Bean.**—Of late years there has been great improvement in this class of Beans. We have secured greater length of pod without that thick shell or woolly matter. The best cropping variety I grew last year was Veitch's Improved Long-pod Bean. It bears freely in light soils, and is equally as hardy as any of the smaller kinds, and in my opinion as regards quality better than many. I do not know of any kind more prolific or more vigorous, and each pod contains five or six beans, which are of a delicious flavour when cooked. The great drawback with many of the large-podded varieties is their lateness, but this is quite as early as any of the small so-called early forms, and being a greater cropper is a desirable variety. From its appearance I should say it is a large early green Long-pod selection, and those who only grow one or two varieties will find this useful in every way.—G. W.

**Notes on Cauliflowers.**—With the thermometer down to zero several nights in succession great havoc has been wrought amongst the Broccoli, and it is certain that a large quantity are completely killed, and probably many more will succumb later on. Cauliflowers in cold frames, although protected by mats, &c., look in a miser-

able condition, and I think will be of little service; consequently, special efforts will have to be made to meet the demand for this vegetable by raising plants in heat and doing all that we can to secure an early supply. The selection of varieties is of some considerable importance, as by sowing extra early sorts and giving them every attention good and fair-sized Cauliflowers can be cut in twelve weeks from time of sowing. So far I have found no variety equal to Carter's Defiance Extra Early Forcing for sowing under glass; the plants are strong, dwarf and well-shaped, of nice size, just the thing for a gentleman's table, and is altogether a variety that I can confidently recommend for very early work. Sutton's First Crop is another most excellent early or mid-season variety, rather larger than the last named, but not so early. Sown at the same time and given exactly the same treatment, it was eight days later in coming into use; however, it forms a grand successor to that variety, and is a good summer Cauliflower as well. For keeping up the supply until Autumn Giant is fit to cut I always rely on a good strain of Early London, and which has never disappointed me in hot or cold seasons, always producing medium-sized heads of excellent quality. At various times I have tried late Cauliflowers against Veitch's Autumn Giant, but have yet to find a variety that will equal that sterling sort through good and bad seasons alike. Beyond question it has proved a great boon to the whole gardening community, and it is doubtful if it will ever be equalled, much less surpassed, in its season.—W. G. C.

**Ne Plus Ultra Cucumber.**—This Cucumber is well known in some parts of Gloucestershire, Worcestershire and Herefordshire, and, I believe, originated amongst the Cheltenham market growers. The fruits are about 14 inches long, of a green colour, and more freely produced than in any variety I have ever seen. Under the high pressure system of giving no ventilation and affording ample atmospheric moisture, with liberal root feeding, it will continue bearing in a remarkable manner for months. For either home consumption or market this variety is well worth a trial, and I believe that once grown its cultivation will be extended. I should also add that it is not only of value as a summer variety, but also for winter work, as excellent crops are produced during the most trying months of the year in a temperature ranging on the average about 60°. Probably some of the well-known Worcester or Gloucester seed-men would be able to supply the seed.—W. G. C.

#### EARLY BROAD BEANS.

Most vegetables will be later than usual if means are not taken to forward the crop, as it will be some little time before the soil is in condition to receive seeds of any kind, being cold and wet after the frost disappears. To get a few early Beans is a simple matter; few vegetables plant out better if some soil is attached to each lot of plants. Those who have no room for pots may sow thinly in shallow boxes in rich soil, placing the boxes on warm pipes or flues till the seeds have germinated. When the tops are a couple of inches above the soil, remove the plants to a lighter, cooler place till ready to plant. Cold frames answer well after the plants attain a few inches of growth, as in such they are near the light and well hardened by removal of the lights in fine weather. The other method of raising plants by sowing four to six Beans in a 4½-inch pot is equally good, and there is less fear of the balls being broken at planting time. I do not like, however, the plants to get too much pot-bound, as they do not grow away so readily when planted. If a mass of roots, the lower portion of the ball should be opened out for the roots to lay hold of the soil, otherwise they suffer from drought and are a prey to black-fly. There are other means of raising a crop, but those named are best where time is a consideration. In planting out the Beans raised as advised it is well to

draw deep drills, and as each lot of plants is placed in the ground to put some rich soil, such as from Cucumber or Melon beds, around the roots. Make this firm, and draw some soil to the side of the rows. I have also sheltered with branches of Fir or Yew for a time, and with care the plants will give a supply weeks in advance of those sown in the open, and being very dwarf may be planted at 2 feet to 3 feet apart in the rows. As regards variety, it was always considered best to plant Early Mazagan for early use, but it is not the earliest and the beans are very small. The Early Long-pod is better in every way. The chief points to be observed in growing Broad Beans for a time under glass is to harden the plants well and not crowd at starting. Plant with a ball, and give water in dry weather.

G. WYTHES.

## TREES AND SHRUBS.

### FLOWERING TREES AND SHRUBS.\*

WITHIN the limits of half an hour it is manifestly impossible to do more than call attention to some of the less known trees and shrubs which can be grown in the open air in this country. A mere list of names could be drawn up which would occupy most of the time at my disposal, but such a list—though perhaps useful for purposes of reference—would be very tiresome to read, and much more tedious to listen to. I shall therefore confine myself for the most part to ornamental trees and shrubs which, in my opinion, are well worthy of much more extended cultivation than they now enjoy. Unless specially singled out for comment in the way of hardiness, it may be taken for granted that the plants are hardy in the neighbourhood of London and in the south of England generally. In all probability a large proportion would prove hardy much farther north, but I have not sufficient data to enable me to speak with certainty as to the behaviour of many of them except at Kew and in the neighbourhood of London. The mere omission, therefore, of numbers of very beautiful trees and shrubs must not be taken to mean that the ones mentioned in this paper are superior in any way to those not mentioned. More than half an hour could be profitably employed in a review of garden Roses—not Hybrid Perpetuals, Teas, and so on, but simply of the wild species, botanical varieties, and little-known hybrids.

After these remarks I proceed with the paper, merely stating that I take the natural orders in botanical sequence for the sake of convenience.

The Magnolia family contains a number of the most beautiful flowering trees and shrubs in existence. Fortunately most of these are pretty well known, but the following Japanese species are recent arrivals in this country, and therefore not known to the vast majority of gardeners. *M. Watsoni* and *M. parviflora* are both very handsome plants, and, thanks to Messrs. Veitch, they have been introduced in considerable numbers; this firm exhibited flowers of both at the Temple show. *M. hypoleuca* is a fairly fast growing tree with noble leaves and showy white flowers. *M. compressa*, an evergreen species from Japan, has withstood at Kew, without being in the slightest degree affected by the cold, the rigours of the past winter (1893-4), and bids fair to be an acquisition. Visitors to the meeting held in this building more than a month ago will remember a very strange and abnormal member of the Magnolia family, a basket of cut shoots of which was exhibited by Messrs. Veitch. I refer to *Trochodendron aralioides*, figured in the *Gardener's Chronicle*, an evergreen shrub with the twigs terminated by panicles or clusters of green flowers. This, like the Magnolias above named, is also Japanese.

The Berberis family contains but one genus of woody plants which is deserving of general re-

\* Paper read at a meeting of the Royal Horticultural Society by Geo. Nicholson, June 12, 1894.

commendation. The following species of Berberis are well worth growing, even in select collections of flowering trees and shrubs. *B. angulosa* and *B. coccinea* are both Himalayan; the former has rather large golden yellow flowers, produced singly from the axils of the leaves, and the latter is conspicuous on account of the silvery white of the lower surfaces of its small leaves. *B. congestiflora* is a Chilean plant introduced to cultivation by Messrs. Veitch, and figured some few years ago in the *Botanical Magazine* and in the horticultural periodicals; when developed, the long shoots, densely clothed with golden yellow flowers, make this a most desirable and very ornamental plant. *B. actinantha* is another Chilean species almost as handsome, when well grown, as the favourite *B. Darwini*.

The family Bixineæ is principally a tropical one, but the two genera *Idesia* and *Azara* are worth mention in this paper. *Idesia polycarpa* is a Japanese tree of considerable stature in its native country. In England it does not appear to be long-lived, but it is worth growing on account of its handsome foliage and the pendulous panicles of yellow male flowers. The tree is dioecious (the female flowers are green), but are followed by enormous numbers of small orange-coloured fruits as large as Peas. Like hosts of plants which are generally regarded as hardy, this is somewhat tender in a young state, but if sheltered for a few years it appears to be able afterwards to dispense altogether with protection. I have seen large trees in Northern Italy in places where the winter cold is more severe than with us. Several of the Azaras make charming wall plants; perhaps the hardest is *A. microphylla*, introduced from Chili by Messrs. Veitch. The habit of this is very graceful, and its small fragrant yellow flowers are produced in great profusion on established plants; it should be planted in sheltered places. It would be interesting to know how this species has fared at Belvoir Castle since April, 1890, when the late Mr. W. Ingram read his paper on "Spring Flower Gardening." He says: "I should like to call special attention to that very handsome evergreen, *Azara microphylla*. It is now (at the beginning of April) in full bloom, but it makes its presence felt not by the attractive characters of its flowers, but by the wonderful fragrance they exhale. The garden is filled with an aroma resembling vanilla."

The Camellia family (Ternstroemiaceæ) furnishes us with the genus *Stuartia*, surely one of the most ornamental genera in cultivation. The Japanese *S. pseudo-Camellia* has been exhibited frequently before the R.H.S., and the North American *S. virginica* and *S. pentagyna* are two of the most beautiful plants I know. Those who are familiar with the fine bush of *S. virginica* at Syon House do not need to be stimulated by any word of praise of this plant.

The Mallow family contains, in addition to *Hibiscus syriacus*, which is too well known to need further mention, perhaps only one species of woody plants thoroughly worth growing. I allude to the New Zealand *Plagianthus Lyalli*, a hardy shrub or small tree with large Cherry-like blossoms; it makes an excellent wall plant at Kew, but grows in the open, and is not injured by frost.

*Fremontia californica* is the only member of the order Sterculiaceæ which calls for notice here. In this country it seems to be very short-lived, but the beauty of its flowers renders it worthy of a place on a wall, where it blossoms profusely. I have seen it thriving well as a bush in the open. It would be interesting to learn particulars of the oldest plants now in cultivation.

The Rue family does not furnish us with many hardy shrubs. *Choisya ternata*, well known as a delightful wall plant and an excellent subject for cultivation in pots, is somewhat tender in a young state, but sheltering during severe weather for a couple of years or so enables the plant to withstand afterwards our ordinary winters without protection in the open. Under such conditions we have had the plant thriving and flowering freely as a bush at Kew. *Skimmias* are worthy of mention. The true *S. japonica* (formerly known under the name of *S. oblata*) is one of the best of

all evergreens for smoky grounds; attention has been called to its value in this respect by Dr. Masters. *Pseudagale sepaiaria*, or *Citrus trifoliata*, is nearly allied to the Orange. In the south of England this is quite hardy. The Rev. Canon Ellacombe, in his charming garden at Bitton, has a plant which has fruited; in the neighbourhood of London the plant flowers freely in the open, but does not fruit.

From the Buckthorn family we may select the Christ's Thorn (*Paliurus aculeatus*), a pretty bush or small tree, hardy in the neighbourhood of London. The buckler-shaped fruit is curious. *Ceanothus* is worthy of special mention. Many of the species are too tender for our climate unless they are cultivated as wall plants, but the wealth of flowers and their colour make them desirable garden plants. *C. rigidus* was a sheet of blue a month or more ago at Kew; at present *C. papillosus*, exhibited to-day, is a worthy successor. Neither can be depended upon as bush plants near London. *C. americanus* makes charming masses of delicate flowers, white or white tinged with bluish colour; this only grows about 2 feet high, and at Kew succeeds perfectly in the open. Some of the garden forms or hybrids derived from *C. azureus* make fine bushes, and flower profusely in the open. *Gloire de Versailles* and *Marie Simon* are two of the best. *Rhamnus libanoticus* is conspicuous by reason of its handsome foliage, which assumes a rich bronzy colour in autumn.

The Vine family is well known as supplying us with some of the most beautiful hardy climbers. *Vitis Coignetii* is the only species which I have space to mention here. The flowers are sweet-scented, and the colours assumed by the decaying leaves in autumn are brilliant in the extreme. Those who have seen this Japanese climber in Mr. Anthony Waterer's nursery at Knap Hill, rambling over the trees in its neighbourhood, are not likely to require any persuasion to make them endeavour to procure it for their own gardens.

The Horse Chestnut family (Sapindaceæ) is an important one from a garden point of view. *Koelreuteria paniculata*, from North China, is not nearly so much grown as it deserves to be; its pinnate leaves, erect panicles of yellowish flowers, followed—in favourable seasons—by large bladder-like fruits, make it a conspicuous object in the shrubbery or park, and the decaying leaves in autumn assume a rich red-brown tint. Very recently a new species has been discovered and introduced from South China through the agency of the French missionaries; but it is too early yet to speak of its value in hardy out-door gardening in this country. The Chestnuts deserve special mention—one in particular, *Esculus rubicunda* var. *Brioti*, a form having flowers about three shades deeper in colour than the ordinary Red Chestnut. *E. indica*, figured as long ago as the year 1858 in the *Botanical Magazine*, t. 5117, from specimens from Mildenhall, in Suffolk, is scarcely known in gardens, although it is a handsome species. The Japanese *E. turbinata* is also almost unknown in British gardens. *E. californica* makes a small compact tree; it has glossy leaves and dense panicles of rather small yellowish-white or flesh-coloured flowers. *Xanthoeris sorbifolia*—generally grown against a wall, and still rare in gardens—is quite hardy in the open, although it does not grow so fast as when trained against a wall. It is a Chinese tree, and likes a sunny, open place. The finest tree I have seen is in the famous arboretum at Segrez formed by the late Mons. Alphonse Lavallée.

In the Pea family there is a large number of excellent garden plants. I can only venture here to give a selection of those members which are least frequently seen in gardens. One of the handsomest species in the genus *Genista* is *G. virgata*, which is hardy enough at Kew, many large bushes having withstood probably more than thirty winters in that establishment. Every summer it is laden with a profusion of golden yellow flowers. *G. atnensis*, a South European species, has pendulous leafless twigs when the plants are old, and when in flower the tree (for it really makes a small tree) looks like a golden fountain. *G. germanica*, a charming

little bush a foot or so high, is well worth growing, and in its way is as good as the better-known *G. hispanica*. *Cytisus Ardoini*, a native of the Maritime Alps, is a handsome species only a few inches high; in late spring it forms a carpet of deep yellow flowers. *C. purpureus*—one of the parents of the purple *Laburnum*, *L. Adami*—is a beautiful free-flowering dwarf bush, and its purple blossoms render it conspicuous in a genus where the vast majority of the species have yellow flowers; there are white and bluish-coloured varieties of this. The purple *Cytisus* is much longer-lived if grown on its own roots than when grafted, and apparently even grows more freely under these conditions. *C. purgans*, a compact South European bush, has golden yellow flowers; it is one of the parents of the so-called *Genista præcox*, the other being the white Spanish Broom (*Cytisus albus*).

Amongst the Rest Harrows, or Ononis, we have *O. arragonensis*, a bush a couple of feet or so in height, laden with erect racemes of yellow flowers. This seems to be a comparatively recent introduction to British gardens, and, judging by the Kew experience of some half-dozen years, it appears to be quite hardy enough to withstand the winters near London. *O. fruticosa* is a good companion plant to the last-named; it has rosy-purple or pinkish flowers. *Amorpha canescens*, the "Lead plant" of the United States, is a beautiful species with grey-green leaves and panicles of blue flowers. In nurseries a comparatively worthless plant, a form of *A. fruticosa*, passes under the name of *A. canescens*. *Indigofera Gerardiana*, a Himalayan species, grown in some gardens as *I. Dosua* and in others as *I. coronillaefolia*, makes a handsome wall plant, and also does well in the open; under the last-named conditions, however, it sometimes gets damaged by frost, but springs up rapidly from the root and flowers freely. The Rose Acacia (*Robinia hispida*) is almost always met with grafted on the common Locust; on its own roots it is much more effective and longer lived, and the very brittle branches are less likely to be injured by strong winds. *Halimodendron argenteum*, the so-called Salt tree, a native of Asiatic Russia, does well in sandy soil, but likes all the sun it can get; the foliage is silvery and the flowers purplish-pink in colour. This species does well near the sea. *Hedysarum multijugum*, from Central Asia, &c., is showy enough with its pinnate leaves and long axillary racemes of bright red flowers; it is, moreover, perfectly hardy. *Cesalpinia japonica* is interesting as being perhaps the only hardy member of a handsome genus, the others being tropical in their requirements. It is an introduction of Messrs. Veitch, and is worthy of cultivation.

Any attempt to give an exhaustive *résumé* of the good things in the order Rosaceæ would end in ignominious failure; all I can do is to mention as briefly as possible a few species of the Rose family which are not so often seen as they deserve to be. The first to flower is *Prunus Davidiana* or *Amygdalus Davidiana*, a Chinese Almond which opens its flowers in favourable seasons as early as the end of January; this year at Kew our trees were in fine flower in mid-February. *P. Mume*, a Japanese species with numerous varieties, is also an early flowerer. *P. divaricata*, from the Caucasus, Afghanistan, &c., forms a snowy sheet of blossom long before the leaves appear. In this country it fruits seldom; on the Continent, however, I have seen the beautiful Cherry-like fruits produced in great profusion. *P. pendula*, from Japan, is considered by Professor Sargent to be one of the floral treasures of the world, one of the very best garden plants ever introduced. The habit of the tree, too, is remarkably good, the pendulous branches laden with rose-coloured flowers giving it a fountain-like aspect. *P. prostrata* is a dwarf bush from Persia, &c.; it has small leaves and rosy-red flowers produced before the leaves are fully developed.

Of *P. pumila* there are many forms varying greatly in habit. This plant has a wide distribution in North America and is perfectly hardy. One variety is prostrate; another dwarf, say 1½



feet high; another 4 feet or more in height, and so on. All bear an abundance of white flowers and are quite hardy. *P. japonica* or *P. sinensis* is one of the most charming dwarf deciduous shrubs we possess; it should be grown on its own roots—grafted on Plum stock it soon becomes unsightly and goes off. The double white form is preferable to the reddish-tinted one, and is a more profuse flowerer. *P. triloba*, also from Japan, &c., should also be grown on its own roots; it, too, is perfectly hardy, although as a wall tree it makes one of the most beautiful trees we possess. *P. nana* or *Amygdalus nana*, a native of Southern Russia, &c., is a delightful plant, and also quite hardy.

*Nuttallia cerasiformis* flowers very early in the year, when few things are in blossom in the open air; it is a native of California, and perfectly hardy in this country. I have not seen the Damsion-like fruits produced in Britain, but on the Continent it frequently ripens fruit. Of the *Spiræas* I have only space to mention a few. *S. arguta*, a plant of hybrid origin, a creation of the gardener's art, is an early-flowering kind, one of the very best; in spring it forms a snowy sheet of blossom. *S. bracteata*, introduced from Japan by Siebold, is still comparatively but little known. *S. decumbens*, a native of the Tyrolean Alps, is a pretty rock plant; it grows about 6 inches in height and bears a profusion of white flowers about midsummer. *S. dasyantha*, a Chinese species, is also worth a place even in the most select collection; it has heads of large showy snow-white flowers. *Stephanandra flexuosa*, though the flowers individually are inconspicuous, is a graceful deciduous bush with beautiful foliage. *Exochorda grandiflora*, from China, perhaps does best as a wall plant, although it is perfectly hardy—the large snowy-white flowers not being so likely to be injured by the cold of our English springs. *E. Alberti* is a Central Asian plant of much more recent introduction. *Eucryphia pinnatifolia* is one of the numerous fine shrubs introduced from Chili by Messrs. Veitch; in the neighbourhood of London, at any rate, it is quite hardy. A beautiful shrub is *Rubus deliciosus*, with large white Rose-like flowers; it is a native of the Rocky Mountains, is perfectly hardy, and does best in a good stiff loamy or clayey soil; in light sandy spots it does not assume its true character, and is not satisfactory. The Roses, the single ones, species or first crosses, would supply abundant materials for a paper, simply treating them from a purely gardening standpoint. A fortnight ago *R. lutescens*, with its large creamy-yellow flowers, was a mass of flower at Kew. *R. microphylla*, a native of India, is exhibited to-day; it has peculiar spiny fruits, which when ripe exhale an odour somewhat resembling that of the Pine-apple. *R. macrophylla* is another Indian species, a tall-growing bush with long leaves and red flowers, followed by peculiar long fruits. *R. sericea*, also from India, is not nearly so well known as it should be; its white flowers are produced abundantly in the open and the bush is quite hardy. One peculiarity deserving of mention in this species is the fact of its very frequently having only four petals. As it is not mentioned in Mr. Webster's useful little book, "Hardy Ornamental Flowering Trees and Shrubs," a book which nevertheless contains a considerable number of little-known plants, I presume it is even less known than I at first thought. *R. arkansana* is distinct in colouring and a profuse flowerer; it makes a bush 6 feet or 8 feet in height. *R. involuta* var. *Wilsoni*, from the Menai Straits, and *R. hibernica* are two of our native British Roses which are worth a place in the garden, the former on account of the beauty of its rosy-red flowers, and the latter on account of its compact habit, glaucous leaves, white or flesh-tinted flowers, and handsome fruits.

Of the Thorns and Crabs I have no time to speak. I venture to suggest, however, that much good work might be done if gardeners and nurserymen exhibited fruiting branches of these during the autumn meetings of the society. The Cotoneasters are, most of them, not only very ornamental when in flower, but still more ornamental when in fruit. *C. frigida* has large corymbs of white

flowers followed by scarlet berries, and *C. bacillaris* white flowers and black or purple-black fruits. *C. horizontalis*—like the two species already mentioned, a native of the Himalayan region—is very distinct in habit, the branches being arranged in a distichous manner; the flowers, particularly when in bud, are reddish tinted. *Pyrus arbutifolia* and *P. nigra* are pretty dwarf shrubs with white flowers; the first has red fruits, and ripens late in the season, the other black fruits, ripening early. The foliage of both assumes a rich red colour in autumn.

The Saxifrage family is rich in garden plants. The genus *Deutzia* is well known, but a recently introduced Japanese species, *D. parviflora*, is scarcely known as yet in this country. It is a perfectly hardy shrub, and one of the best of a genus all of which are desirable plants. The genus *Philadelphus* contains a number of most useful flowering shrubs. I mention specially *P. microphyllus*, a Western North American dwarf shrub, with small white flowers; it comes in very useful in places where there is not sufficient space for the taller-growing species. *M. Lemoine*, of Nancy, has raised a number of hybrids between this and *P. coronarius*, the Mock Orange, and these also are really excellent garden plants. The Rocky Mountain *Jumescia americana* is worth growing; it is a dwarf bush, free flowering, and perfectly hardy. *Carpenteria californica*, a handsome shrub with large *Philadelphus*-like flowers, is generally grown against a wall; it, however, thrives as a bush in the open shrubbery. Of all the *Escalonnias*, *E. Philippiana* is the hardiest in the neighbourhood of London; it is a compact grower, and produces an abundance of white flowers. *Itea virginica* is hardly enough, but likes a strong loamy or clayey soil; it only grows about a couple of feet in height, and its terminal erect racemes of white flowers are very showy. This plant, too, is worth growing, if only for the beautiful autumnal tints assumed by the decaying leaves.

## THE ROCK GARDEN.

### III.

FEBRUARY 11.—Since my last notes on the rock garden relating to winter effects and early blooming hardy plants we have had in the western counties a continuous spell of cold weather of exceptional severity. The ground for the most part is covered with several inches of snow, and cold easterly winds accompanied by a temperature varying from 6° to 22° of frost have been the order of the day during the last fortnight. Most of the smaller rock plants mentioned in my previous notes are buried beneath a hard crust of frozen snow, and, with the exception of rock shrubs, only such plants are visible as are occupying abruptly sloping ground where the snow could not settle. The continuous hard frost has bronzed the foliage of many plants which do not generally lose their bright green colour during winter. In the foliage of *Saxifraga tridactylites*, for instance, I do not remember having previously seen such a decided change from green to bronze, and *Gentiana verna* is quite of a reddish hue at present.

Flowers among the rocks under such exceptional circumstances as regards the weather are, of course, quite out of the question this week, but on looking over various rock gardens one cannot help noting the effect of dwarf shrubs introduced here and there for the sake of giving greater prominence, especially to elevated portions, where special provisions have been made to keep the roots of the rock shrubs away from the smallest and choicest alpenes. Among such dwarf shrubs, which are handsome even now, though the snow is covering the ground, I will mention a few of the most striking.

*Azalea amena*, whose flowers are not due for several months to come, is, nevertheless, very ornamental just now, owing to its

compact habit of growth and irregular mode of branching. The same might be said of the alpine *Rhododendrons*, *R. ferrugineum* and *R. hirsutum*. Several kinds of shrubby *Veronicas*, too, are very effective winter ornaments. In Messrs. Veitch's rockwork at Exeter four of these were planted side by side about three years ago, and it is interesting to note their relative progress. *Veronica Colensoi*, which flowers late in the season, has made a compact little bush about 1 foot through, and its bright green glossy leaves are very conspicuous just now. *Veronica salicoides* is still only about 3 inches high and perhaps 10 inches in diameter, which proves the exceedingly slow growth of this variety; the foliage is of a yellowish green tint, and resembles more that of some *Lycopod* than a *Veronica*. *Veronica cypripedoides* planted at the same time is now about 1 foot in height, and might well be mistaken for a conifer. *Veronica pinguifolia* by the side of it has formed a spreading bush, covering several square feet with its prostrate stems and glaucous foliage, which hanging over the stones are very effective.

Another rock shrub of prostrate habit and of effective appearance even during this cold weather is *Arbutus Uva-ursi*, which grows downwards over rocks and soil, and is well adapted for covering stony banks. Peculiarly striking, too, is *Hedera conglomerata*, the only Ivy which I think should be used in a rock garden that contains small alpenes, which would soon be killed by fast-growing kinds of Ivy. I have just seen a specimen of *Hedera conglomerata* which was planted nine years ago, and is now a bush scarcely more than a yard in diameter and about 15 inches high. Instead of clinging to soil or stones the branches turn upwards, and are densely clothed with compact masses of foliage. Among the rock shrubs which are handsome at the present cold season I may also mention *Raphiolepis ovata*, which has not suffered in the slightest degree from the effects of the continuous frosts we have had lately. The plant in question is growing among stones covered by a woolly carpet of *Thymus lanuginosa*; it was planted about ten years ago, and forms a handsome bush about 2½ feet high and 4 feet in diameter. It flowers every year, but its ovate, thick leathery leaves give it an ornamental appearance all the year round.

The severe weather has left its mark on several of the larger kinds of plants forming a background to the rock garden. *Carpenteria californica*, for instance, has quite a shrivelled appearance owing to its leaves being curled up by the sharp frost, but as the same plant stood 22° of frost during a previous winter without any protection, its leaves will probably expand again as soon as the weather breaks up. *Fremontia californica* also appears to have suffered a little, but though its foliage has become brown, the buds appear to be green and healthy. Another rare plant, *Eucryphia pinnatifolia*, does not seem in the least affected by the continuous severe frost, and is already showing its fresh, green buds quite 1 inch in length. *Magnolia stellata* is densely covered with flower buds, and promises to look better than ever in spite of the hard weather.

A fine specimen of *Romneya Coulteri* retained its green leaves in perfect freshness until the beginning of January, but since we had 20° of frost all stems and leaves are withered to the ground. As, however, the plant is well established, this probably will not affect it, and the withered stems and leaves will afford shelter to the young crowns below the ground.

Enter.

F. W. MEYER.

(To be continued.)

## NOTES OF THE WEEK.

**Galanthus cassaba**, two years established, is now in flower, showing above the snow: it certainly gains in strength and beauty, and is going to be one of our best and hardiest kinds.—T. SMITH.

**Marettia bicolor on an open wall.**—I saw this plant during the month of October last growing luxuriantly and flowering in the freest possible manner on an open wall in a garden near Bray, where it had been for two years at least, apparently happier than I ever remember to have seen it under glass.—T. SMITH.

**Puschkinia scilloides.**—There was a note in this plant in a recent issue having reference to the fondness of slugs for it. I wonder if by *P. scilloides* *P. libanotica* is meant? There is not so very much difference apparently between these two bulbs. The latter, however, is very plentiful, while the former is scarce.—T. SMITH.

**Anthracite coal.**—With the thermometer a few feet away at the time of writing registering 24° of frost, it is a comfort to feel that all the houses being forced are perfectly safe, and a correct temperature in each through the use of anthracite. After using it for many years, I can recommend it as a boon to gardeners and economical to their employers, as though it may cost more than the ordinary fuel at first, it more than counterbalances that by the time it burns without replenishing or other attention, and also being smokeless, it is no nuisance if the gardens are close to the mansion.—W. G. C.

**Iris Historic.** The extreme hardness of some hardy plants is well shown in the case of this Iris. In a nook looking east is a colony with one flower open and numerous buds in various stages of expansion. The ground is as hard as iron. There is a little sunshine most days, which, of course, they get the benefit of, but which is not enough even to thaw the surface. How under such conditions this charming bulb continues to make progress from day to day is an utter mystery. One would imagine it should have been melted into pulp instead, but it looks bold and happy quite as though it liked it.—T. SMITH.

**Sarracenia purpurea.**—A number of plants of this in pots standing just below the water surface of an open air tank have been fully exposed to all the terrible frosts we have lately had. In many cases the pots are smashed from around them: in most of the others the soil and plant have been lifted up half way out of the pots. I know it comes from a region where frosts are more severe than anything we experience here: still, a plant in nature, more or less protected by herbage and snow, is much more favourably situated than are those described above. If they come through all right I think we may safely call it a hardy plant: at any rate I will let the readers of THE GARDEN know.—T. SMITH.

**National Chrysanthemum Society.**—The general committee of this society held a meeting at Anderson's Hotel on Monday last, Mr. R. Ballantine in the chair. Most of the business done was in view of the annual meeting of the members on Monday next, and occupied the attention of the members until an unusually late hour. The draft schedule for 1895 was received and passed except the classes for special prizes. The draft report for the past year and balance sheet were also presented, the latter showing that income had been received to the amount of £895 19s. 6d. Mr. Briscoe Ironside drew attention to the proposed alteration in the rules, which conferred upon the vice-presidents the privilege of being *ex officio* members of the floral committee, a body specially chosen for a particular work, and he thought it was to be feared that at some future time difficulty might arise because vice-presidents were not in every case Chrysanthemum experts. There was a good deal of discussion on this subject, and

ultimately the recommendation was withdrawn. The Windsor Horticultural Society applied for admission in affiliation, and a few new members were elected.

**The Jew's Mallow** (*Kerria japonica*).—Amid the prevailing wintry desolateness of the garden during the last week I was forcibly attracted by the soft green tint of the long rods or slender stems of *Kerria japonica*. A good-sized clump of this (some of the rods of which are over 10 feet high) grows close to a high Hawthorn hedge here, and with the ground covered a foot deep or more with snow and little else to strike the eye except the drab-coloured Gooseberry bushes and the darker brown of the Hawthorn hedge, this cheerful green clump of *Kerria* stems came out in very prominent relief with a most enlivening effect. Permit me to recommend it very strongly as an excellent subject for positions in which small conifers are often planted near dwelling-houses for a cheering winter view from the drawing-room windows. The pleasing soft green tint of the *Kerria* stems (in a good-sized clump) is infinitely more agreeable to the eye at that season than the sombre green of the foliage of conifers.—W. M.

**A fine new Violet.**—The San Francisco *Examiner* describes the new Violet named California the result of a chance experiment in cross-fertilisation of Professor Emery E. Smith as one of the botanical achievements of the century. Mr. Joseph Carbone, as the cultivator of the new flower, must share the honours with its raiser. The new Violet is described as follows by the *Examiner*: "The Violet has never before attained such beauty as it now possesses in its latest and most perfect development. The purity of colour, the delicacy of fragrance, the grace of form, and the unusual size of the California place it easily in the lead of all other flowers of its species, and with many it will rank as the most beautiful of all flowers." Professor E. E. Smith, in speaking of the flower, says, "It has been in the course of propagation three years, and has now attained its most perfect form, colour, fragrance, and size. It is a vigorous plant, absolutely free from disease of any kind, and so unlike many other Violets. Its flowers are of immense size, sufficiently large to more than cover a silver dollar. Its colour is a clear violet purple and does not fade. The fragrance is intense, and the stems vary in length from 10 inches to 14 inches"—W. E. GEMBLETON.

**A note on Pears.**—I have been reading with great interest the remarks by your correspondents on Pears, more especially as I am unfortunate enough to have between thirty and forty varieties here, many of which I do not even know the names of. I took charge of these gardens in the autumn of 1893, so have not had an opportunity of becoming acquainted with the good or bad qualities of this large collection, the season of 1894 being with us very unfavourable to them, plenty of fruit, but small and for the most part flavourless. The one exception as to size was Winter Nelis growing on a south wall. The fruit was above the average. Josephine de Malines, also on a south wall, bore a fair crop of fruit rather under the average size, and, strangely enough, about one half ripened well about the beginning of December and the other half is still in the fruit room, now ripening, but without a particle of flavour. A favourite Pear here for dessert is one called the Glastonbury Pear. The tree is trained over an arched trellis, and in 1893 bore a heavy crop of very fine fruit which ripened in October, the shape and colour resembling the variety Benedictine. I should have sent you a sample last year, but, like many others, the fruit was so small and spotted that they would not be recognisable. I should be obliged if any of your readers could tell me something more about it, and if it has another name.—T. CARTER, *Butleigh Court Gardens, Glastonbury.*

**The weather in West Herts.**—Although the weather during the past week has been a de-

cid improvement on that of the previous one, and there was a cold thaw on several occasions during the daytime, the frost which set in on the 22nd of January still holds, having now (Wednesday) lasted exactly thirty days. During this period the thermometer exposed on the snow has on no night indicated less than 11° of frost, and on five successive nights registered more than 30° of frost. On level ground the Grass has been continuously covered with snow from 1½ inches to 3½ inches deep for the last twenty-four days. The frost descended into the ground on the 18th to its lowest point—to the depth of 20 inches. Since then the thermometer at 2 feet deep has risen four-tenths of a degree, and that at 1 foot deep nine-tenths of a degree. There has been no measurable fall of either rain or snow for eighteen days. For over three weeks the wind has been almost constantly in the north-east—that is to say, during that time it has only blown from any other points than those between N and E.S.E. for altogether fifty hours. The 16th and 19th were very bright days for February, the record of sunshine amounting respectively to 8 and 7¼ hours.—E. M., *Berkhamsted.*

## MANURE FOR GRASS FIELDS.

WILL any correspondent inform me the best and most economical manure for the above? The soil is good loam, with deep gravel subsoil in south of England.—HAYLING.

\*\* Much depends whether you have manures at command or can obtain them readily, as the question of cost is a considerable item. The land being good loam, there are great advantages, and it is easier to select suitable manures. If animal manures can be obtained readily I would give them the first place. Horse manure is most valuable for a loamy soil, and if cow manure can be mixed with it, I do not know of any better material, as the subsoil being gravel, the manure is more holding and not so readily washed down when spread on the surface. But cow manure to be in condition must have fermented, and is excellent when mixed with other manures or soils. If mixed in such a manner that the ammonia is retained, few manures are more valuable for your purpose. By mixing, I mean taking each manure as gathered in small quantities and placing in small heaps, frequently turning, so that the heat is not too violent or the manure wasted by too rapid evaporation. This manure not only feeds the plants, but adds to the soil when placed on the surface, giving the surface roots greater strength; whereas artificial fertilisers cause a quicker root action, but not so lasting. Hence the value of animal manures. My next point is, can you obtain such manures in quantity and at a low price? If so, I advise doing so in preference to others, or if only a proportion can be obtained, dress a part of your land one year with the manure and give a light dressing of a fertiliser next. Some few years ago the writer took over 300 acres of Grass land that had been impoverished for years. Animal manures were too costly, and attention was given to night soil which could be had for carting. This was got in quantity and mixed with gaslime, placed in large heaps, and spread liberally early in the year. The cost was not much in comparison to other manures, and I never saw finer results. Perhaps you may be in a position to try this, but of course it cannot be used when fresh. I believe, however, that night soil mixed with road scrapings, man or soil is better than gaslime, as the lime destroys a large amount of the ammonia, which should be retained. My reason for using it was, having a heavy clay land to deal with it was required; in your case it is not. As regards artificial foods, they have not all the same value and require to be procured from a good source; then they are valuable for plants. Probably you will be unable to procure sufficient animal manure this season and must have other aids. The effects produced on Grass by nitrates is evident after such land has been neglected for years, and the outlay will be well repaid.—W. S. M.

No. 1215. SATURDAY, March 2, 1895. Vol. XLVII

"This is an Art  
Which does mend Nature: change it rather; but  
THE ART ITSELF IS NATURE."—Shakespeare.

## TREES AND SHRUBS.

## THE SCARLET-FRUITED THORN.

(CRATEGUS COCCINEA.)

WHERE the ornamental qualities of the specimen are the planter's principal consideration, this North American Thorn certainly deserves more than a passing notice, for both flower, fruit, and decaying leaves form a prominent feature of the tree at their respective seasons. The Scarlet-fruited Thorn is a native of a considerable tract of country in North America, and though known here for the last two centuries, its merits are not sufficiently recognised. It is a free, vigorous-growing tree, reaching a height of 20 feet or thereabouts, and is amply furnished with large, bright green, shining foliage. About the end of May the clusters of large white blossoms are borne in great profusion, while the berries which succeed them are, when ripe, of a bright coral-red colour, and in this state are remarkably conspicuous. In autumn, before the leaves drop, they become richly suffused with yellow, and here and there occasionally a flush of scarlet. The spines of this Thorn are long and formidable, but in most cases are but sparingly produced. As a medium growing tree for an isolated position on the lawn, the Scarlet-fruited Thorn is well suited; its ornamental qualities are then brought prominently forward. From the frequency with which it occurs in its native country, and the readiness with which it can be raised from seed, it is obvious there must be some well-marked varieties; still none of them are superior to the ordinary form, and some not equal to it.

Besides this, several other North American Thorns are very ornamental, prominent amongst them being the Washington Thorn (*Crategus cordata*), especially noticeable on account of its late-flowering habit, in which respect it is even more tardy than the European *Crategus tauacetifolia*, which is usually regarded as one of the very last, but I have seen the American species in full bloom when the European one was over. *C. cordata* forms a small tree, rather compact and regular in outline, with dark green shining leaves and large clusters of white blossoms. The berries are deep red, but no larger than those of the common Hawthorn, and are seldom borne in any great profusion. Thorns of the Cockspear class, represented by the typical species (*C. Crus-galli*) and several varieties, are all handsome, while among them are to be found some well-marked forms. In the typical Cockspear Thorn the leaves are bluntly ovate, of a bright shining green, and the whole aspect of the tree low and spreading. A fine bold variety is *arbutifolia*, in which the leaves are larger and the whole plant more vigorous than the type; while quite a curiosity is furnished by *linearifolia*, or *salicifolia*, as it is sometimes called, the leaves of which are narrow, while the branches extend in a horizontal manner, so that if grafted at a height of 4 feet or 5 feet from the ground the plant forms a flattish head, which renders it very distinct. A near ally of the Cockspears is *C. macrantha*, whose most prominent feature is the large curved spines, which in size surpass those of all

the others and present a most formidable appearance. The greenish yellow fruits of *C. flava* stamp it as a distinct North American Thorn, but it is certainly less ornamental than any that precede it, while the same remarks apply to *C. spatulata*, a low, but neat-growing kind with peculiarly shaped leaves, which are retained till late in the season, so that it is often quite sub-evergreen in character. The flowers are not particularly conspicuous, while the sealing-wax-like berries, though bright, are too small to be very showy. From a fruiting point of view, one of the most distinct of North American Thorns is *Crategus Douglasi*, which attains the dimensions of a small tree. It belongs to the early flowering section, and though pretty when in bloom, its most interesting stage is when laden with haws, which are freely produced. The berries are of a deep, almost blackish purple, and larger than those of the European *C. nigra*, the berries of which more nearly approach a black hue than do those of the American species. All the Thorns herein mentioned are perfectly hardy, and in no way particular as to soil or situation. T.

**Golden Scotch Fir.**—This is at its best during the dull days of winter, and on this account is more noticed than it would be later on. It is a compact, bushy growing form, whose foliage towards the end of autumn becomes of a deep golden tint, which is retained throughout this winter, till on the return of spring the specimen resumes its normal green hue, and remains in that state till autumn again sets in. From this peculiarity it is very desirable, as some of the golden *Retinosporas* become at times bronzed during the winter, and the tint of this Fir is very bright and cheerful. It is by no means the only well-marked variety of Scotch Fir, there being among others a silver variety (*argentea*), in which the leaves are of a silvery grey tint when first expanded, but lose their brightness later on. It is more tree-like in growth than the golden form. Among the varieties remarkable for differences of habit may be especially mentioned the Highland Pine (*horizontalis*) and a weeping form (*pendula*), whose branches droop in some instances a good deal. A direct contrast to this last is furnished by the variety *fastigiata*, almost as upright as a Lombardy Poplar, and a specimen of which among other Firs stands out very conspicuously by reason of its marked divergence in habit. The dwarf form *globosa*, that rarely exceeds a yard in height, suggests some of the miniature varieties of the Spruce, which are so plentiful.—T.

**Ruscus racemosus.**—This, known also as the Alexandrian Laurel, is decidedly the most ornamental of the hardy members of the family, and is in many respects a very desirable little shrub. It is altogether a more graceful subject than the Butcher's Broom (*Ruscus aculeatus*), and its slender shoots reach a height of 3 feet to 4 feet, a well-established clump then suggesting an affinity to some of the hardy Bamboos. The leaves, or rather cladodes, are about a couple of inches long and of a deep shining green. During the spring the flowers make their appearance in little clusters at the points of the shoots. They are small and greenish white, and are consequently not particularly showy. Apart from its desirable features as a graceful little evergreen shrub this *Ruscus* is very valuable in a cut state, as the slender shoots clothed with their deep green foliage are most effective when arranged in a vase, particularly if lit up by a few flowers. In this way the foliage remains fresh for a very long time; indeed, it is one of the most durable evergreens that we possess for such a purpose. It succeeds best in a partially shaded spot, and under such conditions will thrive better than many other subjects on a chalky soil. The common Butcher's Broom (*R. aculeatus*) will succeed under the drip of trees better than most shrubs. It is entirely evergreen in character, and if the berries are pro-

duced in quantity, they are when ripe very ornamental. At the same time the fruits are in many instances sparingly borne. The curious *R. hypoglossus*, in which each leaf produces a smaller one from its midrib, is both curious and ornamental. A strong-growing kind is *R. androgynus*, a native of the Canary Islands. This needs the protection of a greenhouse, and as a vigorous climber for large structures is very effective. In the temperate house at Kew and in the Crystal Palace it covers a considerable space. While the whole of the above were at one time included in the genus *Ruscus*, and are now-a-days always spoken of as such, this last is by botanists grouped by itself under the name of *Semele androgyna*, and the Alexandrian Laurel is *Danae racemosa*.—T.

## SHORT NOTES.—TREES AND SHRUBS.

**Hedera maderiensis variegata.**—"E. J." (p. 74) does well to call attention to this silver-edged Ivy as a subject for house decoration at this season of the year. Nothing could be more effective when arranged with dark-foliaged plants and Ferns, the broad snow-like band standing out in bold contrast to its surroundings.—E. MOLYNEUX.

**The Tulip Tree in the north.**—There is a fully matured specimen of *Liriodendron tulipifera* standing in the grounds belonging to the Right Hon. Lord Houghton, Frystone Park, Ferrybridge. I have seen it bearing flowers equal to any tree of the same species growing in the southern counties. It stands in a dry and sheltered position, and is about 30 feet in height, with a good spread of branches. When I saw it last it was showing signs of decay on the upper extremities, owing, perhaps, to the age of the tree and the climate.—A. R. S.

## COLOUR IN FLORISTS' FLOWERS.

AN acquaintance with our old florists' flowers runs back through more than forty years of my life, and I may, therefore, confess to a long and early love for these plants of special types and selected beauties. Without them the garden would not be, horticulturally, home to me. Like nearly all the brotherhood of florists, I have grown other things as well, and enjoyed them all, but no plants are so associated with the garden memories of a lifetime or recall them so tenderly and so unchangeably as the old florists' flowers.

A few writers on matters floricultural, without anything like love or practical knowledge of these plants, seem to enjoy having a fling at florists for the singleness and intensity of their aim, but probably they amuse us as much as we amuse them. They confuse issues. I am not sure that my friend Mr. Douglas is "bright, rich, and deep" in the colouring of his views on the colours of florists' flowers in his paper of Feb. 9. I do not know the two Carnations which are so artistic, yet rejected of strict florists, but in a rose flake variety, a very pale tint, probably fading with age, and possibly associated, as weak colours often are, with petals of thin substance, would not stand so high with an expert judge as a clear substantial shade of rose—a colour capable of much good variety. The flower might be weak in points of form that would submerge a prettiness of colour. Well formed does not consist in a mere multiplicity of petals, but in the breadth, and substance, and smoothness of each. Many of the southern flowers have been too full and confused, and their strength of a type not calm and powerful, but fussy and indistinct. The white ground Carnation with beautiful rose and purple markings should, by that, be a pink and purple bizarre. Perhaps the third colour—which makes the bizarre, and is here the purple—was insufficiently expressed. In a well-marked flower every petal contains each colour

characteristic of its class. Curiously, although that third colour in the bizarre Carnation is the darkest—and thus presumably the strongest—it is just the one which is apt to wear out gradually with the age of a variety, or to disappear suddenly, leaving the flower a sport into the two-coloured flake classes. Hence a young variety in the bizarre section should possess the third colour in abundant strength to allow for very possible diminution in later life. Third colours are stripes of black, crimson, purple and deep scarlet, and are most highly prized and effective features. There is little fear of the bizarre colour being overdone.

But colours are only half the flowers' wealth and show their beauties but partially on a bad form, by which in the Carnation is meant narrow, strappy, twisted, saw-edged petals. It is too wide an assertion to say that in the florists' Carnation we insist that "the colours, whatever they are, should be of a dark, and not a pale tint"; for then where were our rose flakes and pink bizarres? where the light purple-red and rose-edged Picotees? These are of tints comparatively light, yet still may be of shades bright, deep (not in the sense of dark) and rich. But they are not to be washy or evanescent. There may be something artistic and harmonious in such pallor, but, as the boy said of his harmonious blue milk, "This is indeed weakness!" We require that a florists' flower shall die well.

In Auriculas, my friend deprecates the casting out of edged flowers with violet or plum body colours in favour of those with a black ground. But I do not recollect "a splendid truss of perfectly formed flowers" with a violet or plum body colour rejected because of that. There is Col. Champeys, a kind of puce ground grey edge, and Chapman's Maria, an almost white edge with deep violet body, and Moore's Violet, an old green edge with violet ground, and Countess of Dunmore, a white edge with chocolate ground; but in these and others that I could name the edge was so insufficient or, as the flower grew, was so broken into by the ground colour, that the harmony of proportion was broken up. Along with this went the further fault of inconstancy of these ground colours. Black has been alike the favourite body colour of our best edged Auriculas, and the colour that lives densest and truest till the flower dies. No one but two northerners may remember it, but the best Auricula, with a persistent blue ground colour and snowy white edge in fine proportions, was a seedling of Mr. Simonite's at the London show now many years ago. It never lived to see another—it died of going to London. He and I have for years tried for edged Auriculas with blue, violet, or crimson body colours, but with very partial success—nothing yet that will equal in other properties the black ground edges. So also with the gold-laced Polyanthus of the florist types. If any red grounds were equal in their respective properties to the black ground flowers, they would not be rejected. Lord Lincoln in black, and Kingfisher in red ground varieties were an ideal pair, of most lovely and forcible contrast, but both are lost now. It is a most important point that the gold of the lacing should be as rich as that of the eye and of the same tone of yellow. The lacing is but a golden thread, and a difference in colour on the side of weakness looks threadbare and poor.

I would also embolden the diffidence of my friend on the Tulip, whereof he remarks that the florists' Tulip may have a rich dark-pencilled feathering, but the beam, as it is termed, of a light colour. Or it may have a rich red or dark crimson on a deep yellow ground, and because

of these two colours it is again rejected. "It is a tricolor; it is of no use," says the florist. But verily he does not say that. The florist's inadmissible tricolor is not a flower that has two colours in markings, but one that has a dirty mixture of two colours in its ground of white or yellow. What we mean by a tricolor and reject is a Tulip in which the ground colour, that should be decisively a pure white or yellow, is instead a washy or streaky compound of both. A flamed Tulip is not condemned because the beam of the flame is centrally more glowing, with an intenser colour as if by the fervency of a higher heat. Nearly every one of our best flamed Tulips has this beauty and emphasis of two colours in the beam of the flame. Sir J. Paxton, a model flower, has it in force; Ajax, a lemon ground with black feather and flame, has a crimson beam in the centre of the flame; while in Wm. Lee, the feather and flame are black throughout. Storer's Dr. Hoteheon (I think our best flamed bizarre) has vivid flashes of intense crimson among the dark flame tongues and beam. Scarlet bizarre Tulips, like Dr. Hardy and Orion, have beams flamed with deeper red. So in the class of rose Tulips with scarlet markings on a pure white ground, the flamed flowers are beamed with a lighter or darker shade of red, as in the deep crimson beam of old Aglaia or the pinker flash than the scarlet in Mabel. The same marked feature occurs in the different class colour of the other white ground flowers, the byblemens, with black or violet markings. The only point on which the beam of the flamed Tulip would be accounted weak is where the central colour in it is only a relic or infusion of the old original mother or breeder colour, *i.e.*, the maiden colour of the variety while it was yet in its seedling, self-coloured state of existence. That infancy of colour is inexplicably laid aside when the flower breaks into its completed colouring, and we do not like to see it again if it were very curious, nondescript, and weak, not to say artistic, as in flowers like Masterpiece, which as a feathered flower is jet black on a deep gold ground, but in its self-coloured or breeder form is exactly the harmonious blend of brimstone and treacle.

All the rose class are lovely as breeders, and many of the byblemens too, but some seedling forms of the bizarre class are very old. As to the allowance of stained stamens or filaments (not anthers, for these are always black or yellowish, according to the colour of the pollen upon them), we adhere to purity, and not smudginess of these. They harmonise better so with the pure white or yellow cup than if imbued with a dull and dirty inky tinge.

It may not be easy to explain why a smut upon the nose is so ridiculous, but so it is. Yet are not two colours richer than one? Still, we have a narrow-minded, arbitrary, and florist-like preference for that stamen of the countenance to be unstained. Put it thus, if you will, about our florists' Tulip. The flower is fairer, more lovable, more harmonious with filaments as pure as the silver or golden cup, and no enactment that would allow stained stamens or impure base would ever be recognised or sanctioned by florists who know or grow the Tulip.—F. D. HORNER, *Burton-in-Lonsdale*.

I am glad Mr. Martin Rowan has alluded to the Carnations referred to by me in the paper published in *THE GARDEN*. I am sure there is not much difference of opinion between Mr. Rowan and myself. I had not in my mind when I wrote such growers of florists' flowers as he is. In regard to my Carnation Harmony, I must insist on its being placed in

the class of pink and purple bizarres. The colours are a true pale pink and purple on a white ground, and when Mr. Rowan says "it could only be by courtesy a pink and purple bizarre" I do not follow him. I assert it was not admitted by the florists because of the pale pink stripes and flakes. There can be no doubt about the purple colour; it is not a fancy in any sense of the word. Our leading flower artist, Mr. Moon, and other tasteful persons found certain beauties in it when it was grown in the open borders of the garden at Gravetye Manor. The pale rose colour was there considered a merit which by a leading northern florist was a disqualification. Mr. Rowan will see that I merely wished to point out the difference between a florist who examines a flower with certain preconceived notions as to colour, and an artist, or any other tasteful person, who has been educated to a knowledge of colour effects. The same remarks hold good as regards the rose flake Carnation, and in this connection what does Mr. Rowan mean when he says that Dorothy was as a rose flake but a half-developed flower? How half developed? I had plants of it and grew it under my own eye, and can assert that it was a large, handsome, well-developed flower as regards petal; indeed, one of the largest, the colour a soft pale rose. This pale colour was the only fault any grower found with it. I appreciate the pink and purple bizarre and the rose flake as much as Mr. Rowan does. What I complain of is drawing the line at any particular shade of colour.

Mr. Rowan tells us "that so far from florists despising or rejecting the beauty which belongs to Carnations of other types, classes for these are provided at the exhibitions of all our societies." True, quite true, this. But Mr. Rowan does not tell us who first provided these classes for the outcasts. Not Mr. Rowan, for I fancy they were provided before his time. Not the florists to whom I have already alluded. The florists opposed them, and would have none of them at first. It was the raiser of Harmony who first suggested these classes, and they were put into the first schedules of the National Carnation and Picotee Society (Southern Section). The old florists, like other people, have had to stand aside before the effects of a more liberal interpretation of what is form and colour. In the same manner I suggested classes for fancy Auriculas, and these classes have been in the schedules of the Auricula Society ever since we were able to show collections of them. The classes are seldom well filled, because florists will not grow them; but here again we have the evidence of one of our leading artists who discerns beauty and infinite variety in the fancy Auriculas. Most of those in cultivation have been raised from seed by me, and I have carefully saved and cultivated them for many years. I do not much care whether they come into the florist's definition of a florist's flower. I can grow these and admire them at the same time that I value at their true worth the green, grey, white, and self-edged varieties. This matter of colour and form in florists' flowers gives rise to contention at certain intervals when the subject is taken up in the gardening papers. I believe in a standard of excellence to which florists should work up their seedlings. In all the seedlings I raise I have a certain standard in my mind's eye, and have not been unsuccessful even from a florist's point of view. I took up the yellow ground Picotee some years ago, and as evidence that the florists appreciate my work, they have returned in an election of varieties nearly all my seedlings, and I try to get every shade of colour I possibly can.—J. DOUGLAS.

## ORCHIDS.

## VANDAS.

WHERE there is plenty of room for their full development the larger growing members of this fine Old World genus are among the most beautiful Orchids in cultivation, and there is hardly a species in the genus that is really difficult to grow provided a suitable temperature is maintained. To grow such as *V. cœrulea* and *V. teres* under the same conditions is to court ultimate defeat, as the heat required by the latter is far too much for *V. cœrulea*. This kind will thrive well if given a place in a temperature slightly higher than *Odontoglossums* require, and being rather a restless species, must not be dried at any season. It must also have an abundant supply of fresh air and sun-

growth by exposure to sun and air in autumn, they get along fairly well in the same house. The smaller-growing kinds like a position near the roof, and may be reared in wooden baskets or small pans, according to convenience. Sphagnum Moss will form the basis of the compost for all, being about the best material for their large fleshy roots to thrive in. Charcoal or potsherds must be used with it, broken to various sizes according to the size of the pot or basket. None of the species like disturbance at the root; therefore when repotting give good drainage, and use nothing that can become sour or cause waterlogging of the compost. Fresh layers of Moss may, however, with advantage be added yearly, at the same time removing some of the old and any decaying roots that can easily be got at, and covering as many as possible of the air-roots with the new Moss. The chief insect enemy to Vandas is a small white

account must it be left lying about during the daytime or entrusted to irresponsible persons. It is impossible in this note to deal fully with all the species, but those mentioned below will make a very interesting collection.

*V. AMESIANA* has not been in cultivation long, being introduced by the Messrs. Low and Co. from India in 1887. It is of the dwarf-growing section, and has flowers varying in their tints of rose and pink. A pure white variety, *alba*, has also been described. It may be grown in a comparatively cool house, but the temperature must not fall much below 50° at any time. It blossoms from May to July, and lasts a long time in perfection.

*V. BATEMANNI* frequently grows to a height of 4 feet or 5 feet, and the leaves, which are very thick and leathery, grow from 18 inches to 24 inches in length. The flowers are produced on long, erect spikes, and are 2 inches across, golden-yellow, freely spotted with bright crimson. This kind must have plenty of heat while growing, but 50° to 55° is quite high enough for it during winter, or, indeed, for any in the genus. It is a summer and autumn-blooming species, and was introduced from the Moluccas about 1844.

*V. BENSONI* is not a showy kind, but very well worth growing. It is a native of Burmah, and was introduced in 1866; like its ally, *V. Roxburghi*, it requires a strong moist heat while growing. The flowers are about 2 inches across, and occur on racemes about a foot in length; the sepals and petals are yellowish, spotted with red, the lip rosy-purple, margined with white.

*V. CŒRULEA* (see illustration) is a gem of its kind, and probably the best instance of a blue-flowering Orchid. The sepals and petals overlap, making a full and beautiful flower, the best varieties being quite a decided blue when fully developed. This grows from 1 foot to 2 feet in height, and flowers during the autumn months. It is now fairly common, although for a long time after its introduction it was very rare and valuable. It is a native of the Khasia Mountains, whence it was introduced in 1869.

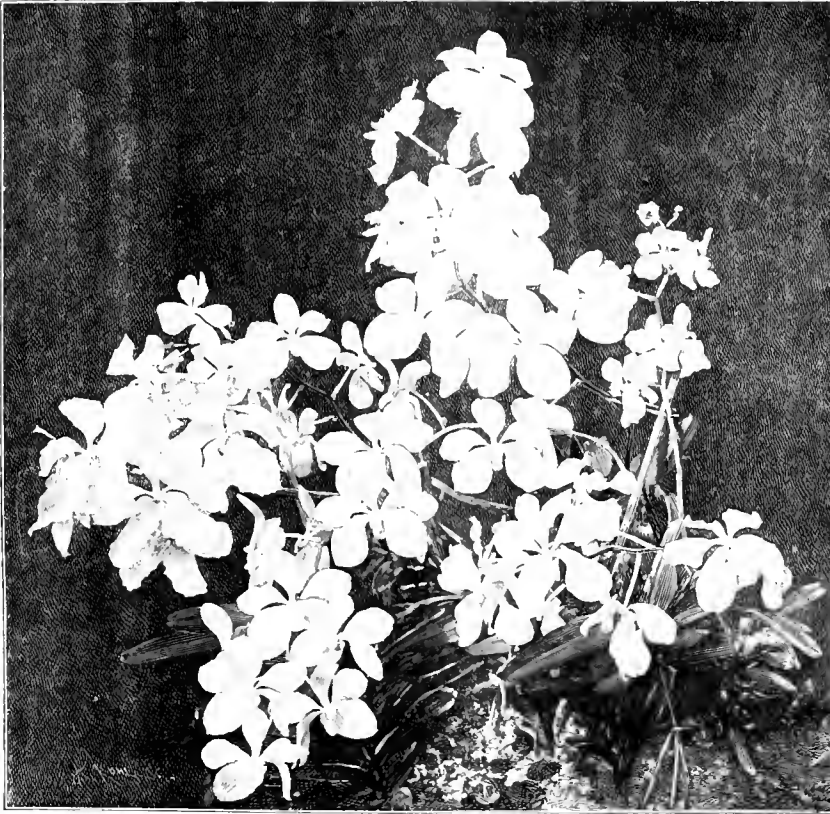
*V. CŒRULESCENS* is a spring-flowering Orchid of great beauty, growing about 18 inches high and producing erect spikes of pale blue flowers, the lip deeper in colour than the segments. This thrives in the Cattleya house suspended in baskets, and has been in cultivation since 1869. A variety of this known as *Boxalli* was introduced some time after, and is much lighter in colour than the type, the sepals being nearly white and the lip deep violet.

*V. HOOKERIANA* requires a strong moist heat and plenty of sunlight while growing. The flowers are usually produced in pairs upon the spikes, each being about 2 inches across. These are creamy-white, more or less spotted with purple. It was first introduced in a living state by Messrs. Low and Co. in 1873, but did not flower until some ten years afterwards.

*V. KIMBALLIANA* is a delightful species which first flowered with the Messrs. Low in 1889; it is not so strong in growth as *V. Amesiana*, which it somewhat resembles, the leaves being more cylindrical. It does well under cool treatment, and should be kept well up to the light. The flowers have a white ground colour with a purplish-crimson lip.

*V. SANDERIANA* is a grand species, bearing large racemes of flowers, each upwards of 4½ inches across, mostly of a brilliant rosy lilac shade. It should be grown in the warmest house, and likes abundance of atmospheric moisture. It is a native of the Philippine Islands, and was introduced in 1881.

*V. SUAVIS* and *V. TRICOLOR* may be bracketed as far as treatment, habit, and shape of flowers are concerned. They are in fact identical in everything except in the ground colour, that of *V. suavis* being white, *V. tricolor* yellow, and as there are intermediate forms between the two kinds, this seems hardly enough to warrant their being entitled to specific rank. The flowers are all more or less spotted, usually with crimson, and deliciously fragrant. They were both intro-



*Vanda cœrulea* in flower. Engraved for THE GARDEN from a photograph sent by Mr. E. H. Woodall, St. Nicholas House, Scarborough.

light, or it will not flower freely. If an intermediate house is not at command, it may, however, be very well grown in the cool end of the Cattleya house, and should be placed near one of the ventilators. The large-growing species, such as *V. suavis*, *V. gigantea* and *V. Batemanni*, are best grown in large pots on the central stages in large roomy houses. Here the atmospheric conditions are not so likely to fluctuate as in narrow, low structures, and the plants, being arranged further from the glass, need less shading than would otherwise be required. They must be treated liberally to induce them to grow as quickly as may be into large specimens, as small pieces never flower satisfactorily, nor is their full beauty seen until they attain a large size. Plenty of heat may be given in the summer to the last-named species, *V. suavis* and its ally, *V. tricolor*, requiring less, although if pains are taken to consolidate the

scale, which clings most tenaciously to the leaves. At the first appearance of this pest the plants should be looked through and carefully sponged, going over them a second time about a fortnight afterwards. This is more important than at first sight appears, for if once these insects get a hold on the plants the spongings will have to be very frequent, and this operation is in some hands very injurious to the foliage, sufficient care not usually being taken to avoid puncture. Cockroaches, too, are often troublesome, eating through the roots and flower-spikes, and doing an immense amount of mischief. The best way to clear a house of these is to lay poison about at night near the plants they infest, making this by using a paste of flour, lard and sugar, adding thereto a small quantity of white or pure arsenic. It is hardly necessary to say that great care is necessary in handling this dangerous mixture, and on no

duced from Java in 1847, and are noble and stately Orchids well meriting a place in the choicest collections.

V. TERRES is a remarkable species of straggling climbing habit if left alone. The flowers are very beautiful, and when the plants are properly treated they are freely produced. It was introduced from Burmah in 1828, and requires a strong moist heat while growing. The racemes occur near the apex of the growth and bear from two to five flowers. The sepals and petals are bright rose colour streaked with golden yellow. Many cultivators are in the habit of cutting the plants of this species over annually, rooting the tops in strong heat, so as to obtain dwarfer, more compact plants which flower freely during the summer months. H. R.

**Orchids from Leeds.**—I should deem it a great favour if you would, through the columns of THE GARDEN, say whether any of the flowers enclosed are special varieties, or only the ordinary run of the type to which they belong. The Cattleyas were all imported last season, the C. Schilleriana very late, whilst the flowers of C. Trianae are cut from seven different plants, No. 1 having been out a fortnight. The two varieties of C. amethystoglossa are both carrying good spikes for imported plants, one ten, the other fifteen. The Cypripediums are C. euryandrum, which, as you will notice, was twin-flowered, and C. Lathamianum, carrying seven flowers. The flowers of *Odontoglossum nebulosum* have been out some time. — T. TYSON, *Roundhay Mount Gardens, Roundhay, Leeds.*

\*\* Very good forms all of them, but not valuable. Now-a-days varieties must be of unusual excellence to be better than existing types.—Ed.

**Phalænopsis leucorrhoda** (*Grower*).—This plant is a supposed natural hybrid between the lovely variegated-leaved species P. Schilleriana and P. Aphrodite, and will produce its blossoms at different seasons of the year according to the strength of the plant. It is a rare and expensive kind, and produces a magnificent flower intermediate between the two supposed parents. This genus requires to be kept in an atmosphere constantly charged with moisture, and if your plant is in good health I would not advise re-basking. If this be necessary, care must be taken not to break or injure the roots which cling to the old wood. It does not require any peat, good living Sphagnum Moss being all that is needed, and this should be kept in a living condition.—W. H. G.

**Lycaste Skinneri alba.**—I have recently noticed one or two fine specimens of this superb Lycaste, which is certainly one of the most beautiful of all white-flowered Orchids. It also has the same advantage as the typical plant, of lasting an exceedingly long time either upon the plant or in a cut state, providing the blooms are not sprinkled with water. This pure white form is a very chaste and lovely flower, and appears to become more plentiful every year, although even at the present time the true variety is by no means common, still commanding a high price in the market.—W. H. G.

**Odontoglossum blandum.**—A very lovely species is this, coming from the United States of Colombia. It grows upon the trunks of trees which are situated in moist localities at about 6000 feet altitude, and it is stated by different collectors to be in bloom nearly the whole year. Under cultivation, however, we find that it mostly produces its blooms during the spring months. These are borne on a nodding raceme and are thickly set. They are creamy white, spotted and blotched with reddish-purple.—W. H. G.

**Ada aurantiaca.**—This is a fine Orchid for the cool house, its bright orange-red-coloured flowers being very useful for making a bright display during the dull winter and early spring months. A spike of this recently came from "S. M.," who states that he has had it in beauty for several weeks, and how charming it looks when intermixed with *Odontoglossums*. This

plant should find a place in every collection on account of its bright colour and freedom of flowering. It is, moreover, of easy culture, requiring to be grown in a pot with good drainage and fibrous peat and Sphagnum Moss, and given exactly the same treatment as the well-known *Odontoglossum crispum*. It is a native of New Grenada, where it grows at considerable elevation, and produces arching spikes of orange-vermilion-coloured blossoms.—G.

**Oncidium concolor.**—It is not too soon for this very bright and useful little species to flower, and if not kept too warm during the winter months, will probably bloom about the month of May or June. G. Smedley inquires if it is a plant worth growing in a small collection where insignificant little species are not required. I know of no better subject than this—in fact it is essentially an Orchid suitable for all amateurs, requiring but little heat and only a small amount of room to grow, and producing freely fine spikes of very showy flowers. O. concolor is a compact-growing little plant, and has been known in this country for more than fifty years. The pseudo-bulbs are furnished with a pair of bright green leaves, and do not exceed both together more than a foot in height. The spike which appears from the base at the bulb is very densely set with blooms and drooping. Small shallow pans are best adapted for the culture of the plant. These should be suspended near the glass at the coolest end of the Cattleya house in the winter, but a little more warmth may be given if required to flower earlier in the season. Fibrous peat and chopped Sphagnum Moss is the best compost; a few nodules of charcoal may also be added, and care must be taken that the drainage is in good order. After the growths are completed this species should be kept rather dry, and during the summer the cool *Odontoglossum* house will suit it admirably. The flowers, which are large, are of a soft delicate yellow in some, whilst others are of a much brighter shade, and the large flat lip is very conspicuous. On well-grown examples a spike will often carry over a dozen of these bright blooms.—W.

#### VENTILATING ORCHID HOUSES.

At no season of the year is more care necessary with the ventilation than the present, when bright bursts of sunshine alternating with cold drying winds and frosts necessitate those in charge being always on the alert. Fruit growers are only too well aware of the mischief caused to tender Vine or Peach shoots by neglect for only a few minutes at a critical time, and although Orchids do not show the results of bad management in this respect so soon, yet sudden changes in the atmosphere can have no other than a prejudicial effect upon the plants. As I write, it is intensely cold outside, and no doubt the glass will fall to about 15° during the night, while at midday it was quite balmy and spring-like. The pipes have to be well heated at night to keep the temperature in the warm houses from falling unduly, and if these are kept close in the morning the heat goes up with a rush as the sun rises, the foliage feeling quite hot to the touch in a very short time. This state of things is quite wrong and very trying to the plants. If a little air is given on top soon after the sun reaches the house, the temperature rises more steadily, the night moisture is gradually and in a natural manner dissipated, and a far more congenial atmosphere produced. This chink of air is usually sufficient at this time of year without opening the side ventilators, and even this must be closed soon after midday. If the sun is bright the houses must be damped rather freely, but not enough to cause a steamy atmosphere. Except when very cold winds are blowing, the lower ventilators opposite the hot-water pipes in the Cattleya house should be opened a little during the day, but closed on cold nights.

This keeps up a constant supply of fresh air to the plants and does not appreciably lower the temperature. These ventilators ought always to be covered with perforated zinc, which prevents a rush of cold air to the plants by breaking up the current, so to speak. In the cool houses these ventilators can be kept partly open night and day, and enough air given at the top of the house to keep the temperature up to about 60° in the morning, rising to 65° at closing time. When the weather is dull and the wind cold, very little ventilation is required in any of the houses and the temperature should be kept about 5° lower than on bright days, too much fire heat causing a weakly growth, and tending more than anything else to the propagation of insects. Air, heat, and moisture must, to use a familiar expression, go hand in hand. Whenever a rise in the temperature makes free ventilation advisable, the atmosphere requires to be replenished with moisture in a like ratio. Too much heat or moisture and too little air are quite as bad as the opposite conditions, but a constantly changing and well-balanced temperature is one of the most important points in the culture of these beautiful plants. H. R.

**Odontoglossum Alexandræ flaveolum.**—I noticed this very distinct variety in flower upon a recent visit to the Victoria and Paradise Nurseries, the plant carrying a fine spike of many blooms. These were of good form and fine substance, being entirely without spots on the sepals and petals, which are of a primrose-yellow colour, the lip being flushed with creamy yellow and slightly spotted with chestnut. It is a very handsome and distinct form.—W. H. G.

**Lycaste lasioglossa.**—Although not one of the most showy Lycastes, this is a distinct and interesting species introduced about twenty years ago from Guatemala by Messrs. Veitch and Sons, and requires similar treatment to other members of this family. The pseudo-bulbs are about 5 inches in length, which, together with the lanceolate plicate leaves, give the plant a height of about 2 feet to 2½ feet. The blooms are large, of good substance, and are borne upon erect scapes 7 inches or 8 inches high. In the flower before me the sepals are spreading, all being about the same size and of a uniform dull chestnut-brown, tipped with green; the petals are concave, reflexed at the ends, and of a clear light yellow, and the lip, which is also yellow, has the front lobe densely covered with long whitish hairs, which give the plant a very singular appearance.—W. H. G.

**Odontoglossum Rossi albens.**—All the forms of *Odontoglossum Rossi* are beautiful, being of dwarf habit, very free-blooming, and easy to grow. They should be cultivated in quite a cool temperature and placed close to the glass, being kept nice and moist all the year through, when they will grow and flower profusely. The variety here referred to is one of the most distinct of this species, and may well be termed the "albino" of this type. It is by no means a common plant, but a very nice example is now in flower in the Victoria Nurseries, Upper Holloway. The plant resembles the typical form, but the flowers are pure white, with a few quite pale green spots at the base of the petals and a bright yellow crest on the lip. These individually are of good size and form a fine contrast to the darker forms.—W. H. G.

**Odontoglossum maculatum.**—This is one of our best known and most useful kinds. It produces its blooms at different periods of the year, although usually in the months of March and April. At the present time a fine form is in flower at Harrow Weald House, carrying some good spikes of large blooms, individually about 3 inches across and of good colour. O. maculatum is a plant that has been known in our gardens for many years and is a native of Mexico, where it grows at a high altitude upon the mountains; con-

sequently it enjoys cool treatment under cultivation, and succeeds best in a pot with good drainage, with a compost of fibrous peat and Sphagnum Moss. The plant greatly resembles *O. cordatum*, especially in habit and growth. The flowers are very showy, with brown sepals, barred with green at the base; the petals larger and wavy, light yellow, spotted with brown on the basal half, as is also the triangular-shaped lip.—W. H. G.

FLOWER GARDEN.

VERBASCUMS.

THE best Mullein grown in gardens is undoubtedly *V. phlomoides*, and although an old introduction, it is only within recent years that



*Verbascum olympicum.*

much notice has been taken of it and its great merits fully recognised. It is a true biennial, as easy to grow as the common Foxglove, and equally certain to flower. A plant so noble and beautiful in lasting bloom should have an important place in our gardens, and it is one of the good things that can be grown in quantity if a packet of seed be sown at the right time. From early summer till autumn is well advanced flowers come in succession upon the tall spikes, and a group or mass makes a picture of lasting interest and striking beauty. No soil or situation apparently comes amiss to it, but, wherever grown, it should be in a bold free way, not dotted about at regulation distances along the border. The Olympian Mullein—a much more recent introduction—has lately become rather popular, but it is never quite so good as the preceding kind, nor capable of producing such good effects. When in flower it is a remarkably showy species, and those who see it then are apt to form too high an estimate of its worth. It is called a biennial, but it cannot be depended upon to flower the second year, three and sometimes four years passing before the flower-spike appears. All this while, however, it is a plant of much beauty, having noble tufts of silvery, woolly leaves, which individually are often 3 feet long and 4 inches broad. In flower it attracts much notice by reason of the tallness and symmetrical branching of the spike, which sometimes attains 10 feet in height, and the multitude of flowers that are open at one time. They are much smaller than those of *V. phlom-*

*oides*, and though exceedingly great in number, the plant does not last in flower more than about three weeks. Further, to do it justice, it must have more care in choice of situation, and only grows to its full dimensions and greatest beauty in deep, warm, well-drained soils. A very handsome Mullein that merits more attention in gardens, especially as it is a true perennial, is *V. vernale* or Chaixi. In flower beauty it is identical with and similar to our native species *V. nigrum*, but has the additional advantage of great height, sending up its noble spikes 6 feet or more. A white-flowered form of *V. nigrum* should become popular when better known and more plentiful. *V. phoeniceum*, about which several notes have lately appeared, is also a pretty garden plant, often perennial, but in any case easy to grow from seed, whilst it embraces a variety of tints, except yellow, the predominating hue of Mullains generally. It is well to bear in mind that the flowers of this kind droop and wither in the sun; therefore in order to enjoy its beauty throughout the day it should be grouped at a spot where only the early morning or late evening sun reaches it. A. H.

LILIUM BROWNI AND ITS VARIETIES.

THE beautiful plate which appeared in THE GARDEN of February 9 will, I feel sure, be fully appreciated by all Lily lovers, and also the able article accompanying the same. But with all due deference to "W. W.," I would submit the following remarks on the varieties of *L. Browni*. Firstly, as to *Lilium Browni*. By this I mean the *L. Browni*, figured as *L. japonicum* in THE GARDEN, vol. xxix., 1886, page 350, which is the *L. Browni* of commerce, so largely grown and distributed in our gardens. This is undoubtedly the Lily introduced by and named after Mr. Brown, nurseryman, of Slough, about 1838 or 1839, but how he became possessed of the same, whether it was a seedling or imported plant, history does not tell us. Of one thing I am quite sure, it has not been imported from China or Japan for many years, if ever, and the stock in this country and on the Continent is kept up by propagation; so on this point and the following I must differ from "W. W." when he states that "*L. Browni* is not a popular Lily." I find it a good doer, succeeding admirably in a well-drained situation, much sought after by all Lily cultivators, and considered by many to be one of our finest hardy Lilies.

Now with all due respect to M. Franchet, "W. W.," and other authorities, I would suggest that the Lily described by M. Franchet as *L. Browni* in his very interesting paper (THE GARDEN, vol. xliii., 1893, page 41) to which "W. W." refers is *Lilium odorum* of Planchon or *japonicum* Colchesteri, introduced into this country in 1804 and figured in the *Botanical Magazine* in 1813, or, as it is now popularly called, the Japanese *Browni*, which is largely imported every year from China and Japan, and perhaps "W. W." refers to this species when he speaks of *L. Browni* as not a popular Lily, for this form does not succeed so well under cultivation in this country. *Lilium odorum* was in cultivation many years before *L. Browni* (Brown) was heard of; it is widely distributed over China and in many parts of Japan, it has a whitish coloured bulb, the foliage is shorter, broader, and of a lighter colour than that of *L. Browni*; the flowers when fully expanded are of a beautiful cream colour, externally splashed and streaked with rich chocolate-brown. The colouring greatly depends on the amount of sun

the plant receives. I have seen plants grown under glass which did not exhibit any signs of external coloration. M. Franchet describes *L. Browni* as "tinged with violet (red-brown) on the outside." This seems to refer more to *L. odorum* than *L. Browni*, which latter is wholly coloured externally with intense reddish brown. The *L. Browni* spoken of by Dr. Henry as growing near Ichang, if I may so suggest, is probably *L. odorum*. Last year we flowered here a very fine specimen, 4 feet high, from a batch of imported *L. Henryi*. *L. Browni* may be a true species, but surely *L. odorum* should be also classed as a distinct and true species, not as a variety of *L. Browni*. *L. odorum* is found wild in many parts of China and Japan, but, as before stated, I have never heard of nor seen a collected plant of *L. Browni* similar to the form grown in our English and Continental gardens.

*Lilium Browni chloraster* and *leucanthum* are two very fine Lilies indeed and very distinct, especially the latter. As to the true *L. japonicum* of Thunberg, I hope to have it in flower this year, or next at latest, the form described by M. Franchet as bearing cup-shaped white flowers. Whether this will turn out to be Thunberg's *L. japonicum* is a matter that must be left to the future to decide.

Colchester.

ROBT. W. WALLACE.

HYACINTHUS AMETHYSTINUS.

THIS lovely little Hyacinth, which comes from the south of Europe, is at present rather scarce in gardens, but it is a precious and very beautiful kind. It is quite hardy and a slender graceful thing compared with the large spiked Hyacinths with which everyone is familiar. It comes much later into bloom and its flowers appear very late in the spring. They last for a long time and possess a special distinctness by reason of their clear delicate amethyst-blue shade. The flower-spikes grow from 9 inches to 1 foot in height and bear many flowers, which, though tiny, have a pretty effect if the plant is grown in a little group or mass rather



*Hyacinthus amethystinus.*

closely. It is one of those choice things that merit a special position, such as a nook to itself at the base of a rock in the rock garden or at the foot of a wall safe from digging and disturbance. There is a white form, but the greatest

beauty belongs to the type itself in possessing a delightful shade of blue so different from that of other spring flowers  
A. H.

### FLOWER GARDEN NOTES.

**ANNUALS.**—For general flower garden purposes annuals may be roughly divided into two classes: those which, owing to their brief, though brilliant season, are only suitable for outlying parts of the garden where duration of flower, coupled with neat and tidy borders, are not essential features, and those which for a long sustained and effective display will vie with the best of the cutting-struck bedding plants. Again, there is a fairly clear dividing line between those which should be shown under cover, pricked off into frames or boxes, and then transplanted to summer quarters and others that do best if sown in the open where they are to remain throughout the season. This latter distinctive feature does not necessarily follow that mentioned in the preceding paragraph, because some of those sown in the open and that are the least trouble are also some of the most enduring. The comparatively recent introduction of some first-rate taller annuals has given a height not previously obtainable in the family, so that we now have them from the pegged *Phlox Drummondii*—that can be kept at a height of from 3 inches to 4 inches—to the small-flowered Sunflower and the varieties of *Cosmos bipinnatus*, that run up to 4 feet or 5 feet. The three above-named, together with *Nemesia strumosa*, a thoroughly good strain of early flowering Stock, of which Princess Alice may be cited as an example, and a strong and dwarf strain of *Petunias*, as respectively Giants of California and *nana compacta*, rank among the best of the annuals that should be sown under glass. The brown and yellow French Marigolds and the tricolor strain of annual *Chrysanthemums* may be included if the outdoor seed-bed is not of the best and slugs are likely to be troublesome. Asters are not in the list, as, in comparison with the things already named, they have a short flowering season, and are only admissible in quantity under special circumstances when a brilliant, but brief display is required at a given time. If there is plenty of house room, all these annuals may be sown in boxes, the middle of March not being too soon if an early display is required and there are facilities for pricking off the seedlings into other boxes, pits or frames. Where house room is limited, a bed large enough to take a two or three-light box must be prepared for them, building to a height of 4 feet and treading firmly and evenly to avoid rapid sinking of the bed. The aim being to secure a steady and lasting as opposed to a violent heat, the bed should mainly consist of good Oak or Beech leaves, an occasional layer of stable manure being added thereto as the work progresses. About 4 inches of soil will be sufficient; this should be light, but made fairly firm by pressure with the spade. Several varieties named having very fine seeds, the surface ought to be as fine for these as for *Begonias* or *Gloxinias*. For *Petunias* and the *Nemesia* it is advisable to make a slight depression with a thin pencil, damp the drills thus made, and shake on a little silver sand after sowing. The frame should be shaded slightly if the sun is powerful until the seed has started to prevent the soil drying out, and as soon as the young plants are above ground sufficient air given to keep them sturdy. For outdoor sowing, a good half dozen annuals, bearing in mind that with these also the first consideration is a long flowering season, would be the purple and white Mallows, the latest introduction in the *Linarias*, the best forms of *Godetia* and *Gaillardia*, the scarlet *Linum*, and *Mignonne*. It may be noted that the beds for these should be well dug. It is useless to expect satisfactory results from poor, hungry soil and an ill prepared seed-bed; the latter prevents the seed and plant starting away kindly; whilst if there is no holding power in the soil the plants will be short-lived

and the flowering season proportionately shortened. Having made sure of well prepared beds, the principal point is to thin early and fairly hard, that is in relation to the habit of the different varieties, and a mulching of short manure will be found beneficial while the plants are in a young stage.

**PROSPECTS.**—The advisability of pushing forward in early winter all work in connection with rearranging and planting herbaceous subjects, and indeed all planting matters in which such things figure, was never more apparent than in the present season when the earth has remained frost-bound for three weeks (Feb. 15) and all outdoor work is at a standstill. Even with a break in the weather it will be some time before one is able to work the ground, frost having penetrated unprotected soil rather over 12 inches and gone clean through heavy mulchings to lay hold of the ground underneath. It is, of course, a foregone conclusion that early flowering plants, early *Daffodils*, *Doronicums*, *Hepaticas*, for example, will be very late, and I fancy nearly everything except perhaps autumnal-flowering plants will be affected to a more or less degree. I notice, now that the snow is nearly gone, that the points of the foliage are nipped and scorched, as in *Pyrethrums*, and other things are cut back hard to the old stems, as *Snagdragons*. In all cases, however, the damage done is of a trifling nature, and it should be a strong point in favour of the more extensive planting of hardy flowers that they come so well through a winter when the thermometer for seven or eight nights dropped either to zero or within a few degrees of that point, and this, too, after such incentives to a rank sappy growth in the foliage as were furnished by the wet autumn and mild early winter. It may be urged that the power to withstand the most severe weather would be a natural characteristic of hardy plants, but it must be remembered that there are some included in such lists that have by some means acquired the reputation of possessing a somewhat tender constitution. If these have come well through the February of 1895, they may safely be reckoned perfectly hardy.

**FORCED SHRUBS.**—As a place can often be found for *Staphyleas*, *Ribes*, *Hydrangeas*, *Cerasus*, and other similar things that have done service in the houses, they should be gradually hardened off until they can be planted out. A season's growth is secured if the foliage can be preserved intact without being nipped by premature exposure to frost or biting winds. Nice little breaks can be gradually formed of each variety in front of shrubberies of larger growth, working in an occasional clump of evergreen shrubs to relieve the bare appearance that is a natural result of deciduous shrubs in quantity through the winter months. If the shrubs are planted late in spring, so soon as they are sufficiently hardened a mulching of rather long manure is advisable, and in the case of American plants a little special preparation of the soil.

Claremont.

E. BURRELL.

### PLANTS FOR DRY ROCKERIES.

Too frequently the accumulations of earth and stone or clinkered bricks, as seen in many gardens and referred to as "the rockery," are most unsuitable places for the growth of plants. Those that really thrive are very few, and those that exist merely are by no means numerous. Very often this said rockery was originally a heap of earth, into which a few stones have been stuck without thought and without discretion, and, unsupported by moisture, the plants that are placed thereon either quickly perish or simply drag out an existence. The latter fact is probably due more to planting the wrong things than to any other cause. In reality there are quite a number of useful and beautiful subjects that will do well with only a minimum amount of water, even though they are growing on a sloping bank at an angle of 45° or more. And what is of equal value, many of the subjects I shall presently enumerate only need a very little soil in which to grow when

once they are really established. This latter is perhaps one of the most important items, and to ensure this planting should be done early in the autumn wherever possible. By so doing an opportunity will be afforded the plants to commence rooting before their season of flowering arrives and before the soil is rendered too dry for the rooting process to be a success. For example, it would be wrong on the face of it to attempt to plant such a spot in midsummer with the soil already parched and dry, for at such a time the strongest tufts could scarcely survive the test. In these ill constructed rockeries it is surprising how much assistance can be given to many plants by merely planting them a little on one side and by placing a block of stone over the roots on the more exposed side. This will keep the soil from becoming so intensely dry in very hot weather and preserve a uniform state of moisture and coolness about the roots that will go a long way towards making the whole thing successful. I mention this simple way of dealing with such places because very often the rain has but little effect and watering may as well be left alone, for in both instances the water given only carries with it so much of the dry soil down the sloping bank and on to the path below. I have for the past year or two watched the progress of some plants on raised mounds similar to those described above, and seeing many unsuitable things perish indiscriminately, suggested others with better results. Some of the more important of these plants may be useful to readers of THE GARDEN, who will find in the list given material suitable for furnishing these so-called rockeries and other bare spots which sometimes occur in gardens.

Under the circumstances I cannot name in the first place a genus more worthy as a whole than the *Aubrietia*. Of perfect hardiness, dwarf in stature, and free in growth, these beautiful spring-flowering subjects quickly form carpet-like masses, which are smothered for weeks with their variously coloured flowers. These latter are mostly shades of blue, lilac, violet-purple and red-purple hues, all pleasing and effective in their great spreading masses in spring-time. The ease with which *Aubrietias* are increased and the rapidity that they cover large surfaces are items distinctly in their favour. A goodly companion for these may be found in the variegated form of the *Arabis*, which will brighten by its foliage alone even when its white blossoms are faded and gone. Exceedingly useful, too, are some of the dwarf *Campanulas*, especially those of the *pumila* and *turbinata* groups. The former group are perhaps best, as by placing a few roots beneath a stone or beside it, spreading them out thinly, they emerge in all directions in spring-time, and make a very pretty display in midsummer when little remains to follow. The best kinds are *pumila alba* and *pumilla*. If plants are obtained established in pots, shake the roots free of soil in planting and spread them out carefully. In this way a much greater surface will be furnished than by allowing the plants to spread from one tuft. A similar method may be adopted with *C. carpatia* and its white variety *C. turbinata* and others with equally good results. Not only does this simple contrivance insure the lives of the plants against drought, but it also provides the means of making much out of little; while numbers of plants may be utilised which, under ordinary conditions, would not bear a moment's thought. Another good plant may be found in *Alyssum saxatile compactum*. It provides a sheet of golden yellow blossom which in spring-time and for the purpose indicated is not easily surpassed. This may be had in plenty from seeds. Another yellow-flowered plant may be found in *Cheiranthus alpinus*, which just delights in a comparatively dry rooting medium, and, given this, is much longer lived. Its heads of pale yellow flowers are very freely produced in spring-time. I would like to include the orange-flowered *C. Marshalli*, by reason of its rich colouring, though it is not happy in many soils and does not spread so freely as *C. alpinus*.

Another yellow-flowered and most suitable subject may be found in *Corydalis lutea*, a common



plant no doubt, yet exceedingly charming and graceful withal. It is one of those fine useful plants that one meets in an old abbey garden. On the dry bank or slope, in chinks or crevices of rock, and often emerging from the stone and Moss-covered steps in some old gardens, with barely any soil within reach, this little plant grows freely, and in the border will assume quite a vigorous growth, flowering abundantly and continuously for a long time. The same place will prove a home for some of the *Dianthus* family, and especially such kinds as *deltoides*, *easius*, *superbus*, and others, all of which are very pretty when in flower and of free growth.

Another important family is the perennial Candytufts (*Iberis*), which furnish a wealth of white blossom during the spring months, the best kinds being *I. eorrefolia* and *I. sempervirens*. The *Silenes*, again, are very useful for such spots, notably *S. alpestris*, *S. Schafta*, and *S. maritima* fl. pl. Some of the *Eriogonas* should be also included, and of these *E. macrocarpa* will be the best yellow, and *E. taraxacifolia* among those with white flowers. Besides these there are many more, most of which would prove welcome were they but introduced and established. For instance, *Asperula odorata*, *Saponaria ocyroides*, *Crucianella stylosa coccinea*, *Veronica saxatilis* and *V. pectinata*, *Euphorbia myrsinites*, *Vinca*, *Coronilla*, *Helianthemum* in variety where space allowed, *Gypsophila cerastioides*, *Tropaeolum polyphyllum*, many *Saxifragas* of the crustaceous section, also *Sedums* and *Sempervivums* in variety. Nor must we overlook the value of *Thymus lanuginosus* for such positions. It is indeed an invaluable plant, apparently delighting in the sunniest and most exposed positions, and spreading out rapidly into broad woolly carpets that are pleasing at all times. The plants here given by no means exhaust the list of useful and beautiful subjects, while it contains sufficient variety to provide a lengthy season of bloom in spots too frequently barren and unsightly.

E. J.

#### TENDER & HARDY PLANTS IN THE FLOWER GARDEN.—I.

It matters not into what kind of garden we go (from January to the end of May), whether it be large or small, the bedding plants—so-called—are more often than not an encumbrance in the true sense of the word. An excessive use of tender plants during the summer in the flower garden involves not only a vast amount of labour which might be turned to a better advantage, but it is oftentimes the fertile source of delay in, and what is worse still when the labour is all too limited, the ultimate neglect of work which in the end would give in nearly every instance a far more satisfactory return. Take a case or two as examples of this. If it be a small garden, with one or two hands employed, it is an invariable rule when a gardener takes an interest in his work to have every nook and corner occupied. This is altogether praiseworthy; but take entire stock of the tender plants being prepared for the flower garden and note what an advantage it would be if these were either dispensed with entirely or reduced to a minimum. Probably early Cucumbers and Melons are grown. This fact, in order to make the utmost use of the opportunities, is taken advantage of for the propagation of plants for bedding. In some instances these will foster such insect pests as red spider, also the green and black fly. Any grower of Melons does not need to be told of the nuisance caused by the last-named plant pest. Later on overcrowding is the rule until the happy release comes and the plants are in their summer quarters. Turning to larger gardens, we generally find it to be the rule to encumber the fruit houses with the tender bedding plants as the readiest method of getting over the difficulty. No one will, I think, venture to say that it is desirable to have the fruit houses, in whatever stage they may happen to be, in such an overcrowded condition. The construction of the

houses either facilitates such a process or works in an opposite direction. The necessary work to Vines, for instance, has in some cases to be done under difficulties. At the same time the overcrowded condition renders fumigation more needful than it would otherwise be. When an excessive number of tender bedding plants has to be propagated in large establishments and the room at disposal is not at all adequate to meet such a demand, the plants themselves not infrequently are but ghosts of what they should be. Again, in large gardens there is, where the glass is extensive, quite enough work in other ways than to be overburdened with bedding plants, causing an amount of labour in shifting from one quarter to another that can ill be spared. I must say that I think there is already an improvement going on, however. As in medicine one drug is made to operate against another, so in gardening the same thing is in a measure being carried out, in some cases, perhaps, all unconsciously, but none the less so. I allude to the increased growth of the *Chrysanthemum* as a case in point. In taking up the culture of this, the "queen of the autumn," no one who is a gardener has, I fancy, had additional assistance afforded him. The amount of time required has had to be obtained by "robbing Peter to pay Paul," as the saying goes, and if the first-named does in any case represent tender bedding plants, so much the better, in my opinion, are the results. In the old-fashioned days before so many tender bedding plants were used all the work could be begun and finished in May, the houses at the same time being relieved of the stock required much earlier than has been the case since; this, of course, made it much better for other things.

#### BEDDING PLANTS UP TO AND OF A QUARTER OF A CENTURY AGO.

Reverting for a short space to the plants of that period, it will be remembered by many that *Geraniums* were then all-important features, planting *en masse* of distinct colours being the prevailing fashion. *Verbenas* were also about that time and for some years previously in all their glory; so also were the shrubby *Calceolarias* and the old form of *Ageratum*, tall in growth. Of foliage plants then grown, the variegated *Geraniums* were the most important, the silver variegated and the golden being largely depended on; the bronzes and the tricolors were also steadily coming into use more extensively. *Coleus Verschaffeltii* as well as *Iresine Herbsteri* were likewise being tried as foliage plants (along with *Centaurea caudicissima* and *Perilla nankinensis*, speaking from memory). What is now popularly known as sub-tropical gardening had its birth near about the same time under the elder Gibson when at Battersea Park. I well remember the sensation that it caused when first it was carried out on an extensive scale there. Thence onwards a diversion was made from the ordinary run of bedding plants, but these, instead of being of harder character, were, on the whole, much more tender, whilst at the same time they took more room, relatively speaking, and more heat also whilst stored under glass. *Viola cornuta*, one of the forerunners of the bedding *Violas* of the present day, was then popular; this was a welcome addition, being a comparatively hardy plant. Rollison's Unique *Geranium* had already gone out of fashion, good plant that it is still in many ways. The large number of *Geraniums* then grown occupied a deal of useful space, more so probably than any other kind of bedding plants; instead of diminishing, it increased as new varieties were introduced. Border plants of the same period were much more limited than at the present day. By these I mean those plants that are hardy or tolerably so. Then we had the *Hollyhock* in its full beauty, it is true, the disease to which it is now subject not giving growers any trouble. Hardy herbaceous plants had not come to be known as at the present day, their value then being an unknown quantity to a large extent. The borders of that time were more often than not occupied just for the summer months with

lines of tender bedding plants, being commonly known as "ribbon" borders. More often than not these, when the plants were cut down with frost, were left destitute until the following May—not a desirable feature, certainly. There was about the same time a tendency to enlarge flower beds, or at any rate to make them larger than was really desirable. But, on the other hand, the hitherto prevailing fashion of grouping the flower beds with only paths between them was already going out of fashion, being substituted for others on Grass. It was rather more than twenty-five years back that Nesfield introduced his style of laying out flower garden designs, the outlines being worked in Box edging with the pathways intersected, thus forming separate blocks. Into these narrow paths were usually put coloured gravel, shingle, slate, &c. This style was introduced, if I remember rightly, into the gardens at South Kensington during the early days of the Royal Horticultural Society. To use an American saying, however, "it did not take on" extensively, and in my opinion it was a good thing that it was so. It had no real artistic merit to recommend it; in fact, it was a burlesque at flower gardening more than anything else. In order to get the best view of one of these designs it was necessary to ascend to the roof of the nearest building and then look down upon it. The beds under this system were small and narrow, save the central parts, which were chiefly circles. I once had charge of one of these designs, but never found it to produce a satisfactory effect. I would much prefer an old Dutch garden to one of these geometrical eccentricities.

BEDDING PLANTS OF MORE RECENT YEARS.—One of the greatest innovations in bedding plants within the past quarter of a century has been the introduction of the carpet bedding system, which is, however, now declining, and that to the relief of many a gardener who has had an experience of the time taken up, firstly, in propagation and after-preparation; secondly, in planting out, and, lastly, in the extra amount of labour involved in keeping the beds in order during the summer months. These beds, so to speak of mosaic work, are very well as specimens of enduring patience, as well as of the adaptability of certain plants for the purpose, but the extent to which the system prevailed in due course operated against itself without a doubt. Carpet bedding in all but the most favoured of situations cannot be considered as of long duration. It is rarely that a large amount of it is finished before the second week in June (in fact, I have more than once seen it still hanging about towards the end of the month), and before the following September is ended there is danger of injury to such tender plants as *Alternantheras*. Two thirds or more of the year are thus taken up with housing and propagation. Does it pay? I have personally had a weakness, if I may term it such, for the grouping together of succulent plants after the method of carpet bedding, but less formal in character. The various shades of green, of grey and other neutral tints form a happy combination, but I should not advise the extension on a large scale, the one redeeming feature being that most of the things so used are tolerably hardy, whilst others are quite so. Sub-tropical gardening, already alluded to, was the forerunner of the carpet bedding system, and it has largely survived it; at least I have noted it to be more prominent in many places. Compared with the former the latter makes a better show for the same amount, or even less, of labour expended. The system of giving relief to carpet beds by using plants of light growth affords a welcome change, these dot plants, so to speak, taking off the otherwise flat appearance. The great interest at one time taken in the tricolor *Geraniums* has greatly waned; these have had to give place to even more tender subjects. The one redeeming feature amongst bedding of more recent years has been the welcome introduction of the tuberous *Begonia* into the flower garden. Some of us no doubt can recall the time when *B. bolivien-sis*, *B. Pearcei*, *B. roseolora* and *B. Veitchi* were first introduced into commerce. These

species were the forerunners of the splendid strains of tuberous Begonias now in cultivation, and if the Messrs. Veitch had never introduced any other plants than these or raised other hybrids, there would have been in these facts alone sufficient to hand their name down to posterity. I am fully persuaded that the tuberous Begonia will continue to be one of the finest features in the flower garden for many years to come. Some may say, perhaps, that they are tender plants, but I do not consider them as such to nearly the same extent as many other things, whilst they have one great redeeming feature in that they do not take up any room under glass during the winter months; nor need they do so in the spring to any great extent, for the less amount of coddling they receive the better will be the after results. These Begonias seem to adapt themselves to so varied localities; they are grown well in the south of England, and so they are in the north as well as across the border. I have never seen them luxuriating anywhere to such a degree as in the Lake districts of Cumberland and Westmoreland. Here they were to all intents and purposes quite at home, being one mass of healthy growth and flowers. I saw them thus last July, which proves that they can be got into good condition sufficiently early to secure a prolonged display even away in the north. The raising of young plants from seed cannot be considered a difficult matter, nor do these for the first season, until fit to plant out, occupy much space under glass.

I have already drawn attention to the dotting system amongst carpet bedding plants. Its extended use during the past few years in other descriptions of bedding out has been a welcome innovation. This mixed system can be carried out to great advantage without having recourse to tender plants in any large amount. It has also one decided point in its favour, viz., the plants forming the undergrowth can grow away as they choose without much attention being given to them. I have noted with satisfaction the increased use of Fuchsias in the flower garden, the sturdy-growing sorts of the present day thus showing to good advantage. Several of the species are also admirably adapted for the same purpose. *F. gracilis*, also known under the name of *F. decussata*, should be taken more note of. I have seen it grown as a herbaceous plant in the open border for years together. Sweet-scented flowers or plants have hardly maintained the position which their merits claim for them for several years past; for instance, we see all too little of the Scented Verbena and the Geraniums well known for their fragrance. These no doubt have been supplanted by more showy subjects.

THE PRESENT DAY FLOWER GARDEN—I have noted with pleasure in several instances an increasing amount of attention being turned to really hardy plants. This is as it should be. It should indeed be the chief aim to secure more permanent plants of characteristic features; less dependence will then be placed upon tender plants. A good number of gardeners, and I fancy their employers also, are beginning to tire of the bedding-out system of late carried on. I know as a fact that this is so in some instances, more particularly where it has hitherto been adopted in an excessive degree. On all sides we now hear, if not of actual reductions, at any rate of a tightening of the purse-strings, and if any economy has to be further put into practice, where can it be done more effectually than by dispensing with the more tender and relying upon the more hardy plants? I hope the massing of individual colours in large beds, and the increase still further by too much repetition of one given kind, has nearly died out. The sooner this system has a decent burial, the better for all concerned. No artist would, I think, choose as a foreground to his picture a position which embraced within his vision a mass of scarlet or of pink in an excessive degree. A mere blaze of colour is not real beauty, whilst it must almost invariably pall upon the taste ere long, from the simple fact that it lacks variety, if not from any other reason. What possible advantage there can be in filling

the flower beds with such an excessive amount of any one kind of plant I cannot conceive. The return to hardier plants (for at one time they were the chief factors in the flower garden) should, in my opinion, receive every encouragement. It is not a case in which there is any scarcity of material that can be turned to a good account. The extended culture of the Carnation and allied subjects is worthy of all that can be said in their favour. The same applies to the Rose. Take, for instance, a bed of *La France*; what is there more beautiful or more attractive in the truest sense of the word? Such a prolific flowering Rose as this may with advantage be grown by the dozen. There is, I think, less formality in the flower garden than was the case in bygone years. This, too, is a welcome change, and such a fact ought to be taken into account and be made the most of to introduce plants of hardier constitution. The increased attention to the culture of hardy herbaceous plants is a noteworthy feature. This has been steadily taking root in most gardens, and is still gaining more adherents. Another source which has not so far been made enough of is that of the hardy variegated trees and shrubs, as well as others possessing distinctive features of their own. Then, again, there is a deal yet to be made of the hardy Bamboos and Grasses, which are most appropriate in connection with water scenery. We see a good quantity, for instance, of *Eulalia japonica variegata* and *E. jap. zebra* in pots, but they are quite as well fitted for planting out permanently. The hardy or semi-hardy Palm, *Chamærops excelsa*, is well worthy of extended culture. Bulbous plants, too, of all kinds are being planted more extensively; this is a step in the right direction. The Ivy-leaved Geraniums of the present day are of essential service in the flower garden for vases and baskets as well as for beds; they do not look quite so prim and formal when used for the latter purpose as do the zonal varieties. Their best places, however, are in vases and baskets. The early-flowering race of *Chrysanthemums* are making their way for bedding purposes, thus adding to the variety. Select strains of annuals receive more notice than they did, and they are well worthy of it. *Phlox Drummondii*, intermediate and Ten-week Stocks, *Mari-golds* (French), and the *Tagetes*, *Asters*, and *Sweet Peas* are instances of this. None of these things give much trouble in the raising or after culture. For sub-tropical gardening there is now a fairly good choice without having recourse to the very tender plants raised from seed. The Giant Hemp (*Cannabis gigantea*), the Giant Fennel (*Ferula gigantea*), and the Blue Gum (*Eucalyptus globulus*) are cases in point. The dwarf race of *Cannas* (Crozy's new dwarf hybrids) are proving themselves to be very useful plants. Of miscellaneous annuals which last in beauty for a long period there is also a good choice. *Linum grandiflorum coccineum* (a variety of Flax) I have found to do well both in hot and dry as well as cooler and moist seasons. The blue, the crimson, and the scarlet varieties of the *Anagallis* are excellent for dry situations. In a warm spot *Alonsoa Warscewiczii compacta* thrives well. Another pretty and all-too-much neglected annual is *Nemophila insignis*. Of *Nemesia strumosa* *Suttoni* I am disposed to think most favourably; the past season gave it a severe trial. This year, as during 1892, I hope to see it again in its best condition. *Amaranthus caudatus* (Love-lies-bleeding) is in all respects a grand annual, being well adapted for associating with plants of sub-tropical character. Take a large bed, for instance, as an example of what may be done with a few packets of hardy or half-hardy annuals. There is the Giant Hemp, the taller Sunflowers, the Blue Gum, and the *Amaranthus* in question, to which *Cineraria maritima* might be added as well as the Chilean Beet and *Salvia argentea*. The major portion of these may be sown upon the spot, the only exceptions being the Blue Gum and the *Cineraria*. Other things which never need much room under glass are the *Chamaepeuce* in variety; *Gaura Lindheimeri*, a hardy perennial, but one that is just as good if treated as an annual. *Grevillia*

*robusta* is a useful plant along with *Acacia lophantha*; both should be grown where much bedding has to be done. These are best raised in heat. *Salvia patens* does equally as well if raised from seed as by lifting the old roots; in many places, however, it will be safe in the ground for several days at a stretch provided it is not a wet subsoil. It is a splendid plant for intermixing with other things. The forms of Golden Feather need not take much room in the houses; it is a handy plant, but one that is often abused by too excessive use. Turning to biennials and perennials, the Canterbury Bells (*Campanula calycanthema* vars.) at once claim our notice; so do the beautiful forms of Columbine (*Aquilegia chrysantha*, *A. glandulosa*, and other hybrids being fine subjects). The *Antirrhinum* appears to be somewhat out of fashion, but it is none the less a useful plant. The very fine forms of the *Gaillardia* are most certainly an acquisition to any garden. *Lobelia cardinalis* is a plant worthy of more attention than it often receives. The Red Winter Cherry (*Physalis Alkekengi*) makes a pretty display in the autumn. J. H.

## GARDEN FLORA.

### PLATE 1003.

#### THE THUNBERGIAS.

(WITH A COLOURED PLATE OF *T. GRANDIFLORA* VARS. \*)

A COLOURED plate of the ordinary form of *Thunbergia grandiflora* was given in THE GARDEN, May 27, 1893, and in the present plate this kind is shown on the left, the two most conspicuous blooms being those of its white-flowered variety, which is very uncommon in cultivation. *Thunbergia grandiflora* is a vigorous growing stove climber that will under liberal treatment soon cover a considerable space and then bloom with great freedom. The leaves of this species are about 6 inches long and hastate in shape, while the flowers, which are from 3 inches to 4 inches across, are of a pale blue, lined with a deeper tint, with the interior of the throat almost white. This *Thunbergia* is a very common plant in India, from whence it was introduced into this country in 1820. At Kew it is quite at home in the Palm house, and has been an object of great beauty there as well as on the roof of the house devoted to the Victoria Regia. The white variety I have not seen elsewhere than at Kew, whence it was introduced from India three or four years ago. Being equally vigorous and free-flowering with the type, it forms a good companion plant to it, and for draping or festooning the roof of a large structure these two *Thunbergias* are among the very best subjects for such a purpose. *T. grandiflora* flowers continuously for a considerable time, often from early summer till the autumn.

*T. LAURIFOLIA*—a good deal in the way of the preceding—was also the subject of a coloured plate in THE GARDEN for September 25, 1886. The most marked difference is in the foliage, which is ovate in shape and, as suggested by its specific name, somewhat like that of a Laurel. It is equally free growing and free flowering with *T. grandiflora*, and, in common with that species, needs a large structure for its full development. It is also a native of India and was introduced in 1856. Besides the specific name of *laurifolia* it is also known under that of *Harrisii*. All of the above may be readily propagated by cuttings of the young growing shoots taken in the spring. For this purpose weak or medium shoots should be chosen in preference to the very strong ones.

\* Drawn for THE GARDEN by H. G. Moon in the Royal Gardens, Kew. Lithographed and printed by Guillaume Severens.





**T. ALATA.**—While a large structure is necessary for the development of the *Thunbergias* mentioned above, this occupies but little space, and it may also be grown in less heat than the others. Though a perennial, it is often referred to as an annual, and succeeds well treated as such, the seeds being sown in early spring, and the plants so obtained will flower the following summer. There are several varieties of this differing from each other in the colour of their blossoms, but all alike in other respects. Among them are white, yellow, orange with a dark eye, white with the same, a self-coloured orange, and others. This *Thunbergia* may be used for many purposes where small-growing free-flowering climbers are admissible. It is also a capital subject for hanging baskets, and in a greenhouse temperature it will during the summer flower well.

**T. FRAGRANS**, which at one time Messrs. Veitch used to grow so well, is a slender-growing climber, with oblong shaped leaves cordate at the base and about 3 inches long. The flowers are 1½ inches in length, pure white and borne in great profusion for a considerable time.

Included now-a-days in the genus *Thunbergia* are the plants at one time known under the generic names of *Meyenia* and *Hexacentris*, the most commonly met with of these being *Meyenia erecta*, which forms a much-branched bush, whose purplish-blue blossoms, lit up by an orange coloured throat, are borne for many months of the year. It is a native of West Africa, and was introduced in 1857.

**T. MYSORENENSIS**, which used to bear the generic name of *Hexacentris*, is a very striking subject when in bloom. The flowers, which are borne in long pendulous racemes, are of a peculiarly curved shape, and in colour red and yellow.

For a more detailed account of the genus *Thunbergia* the reader may refer to *THE GARDEN* September 25, 1886, when the coloured plate of *T. laurifolia* was published. H. P.

## THE WEEK'S WORK.

### KITCHEN GARDEN.

**LATEST SEAKALE.**—The later a supply of Seakale can be kept up this season the better, all early crops being later than usual, and a scarcity amongst vegetables generally in early summer being inevitable. Where old stools, covered some time ago with pots and leaves are commencing to grow, and there still remain in the open ground any yearling crowns, every other row may be taken up and forced, or laid in under a north wall and covered with a foot of leaf-mould to come on gradually, and the crowns in the remaining rows covered with flower-pots and mounded over with soil from the intervening spaces. Thus treated, growth will be very gradual, and a supply afforded after the latest litter-covered permanent beds have been cut over. Some growers earth up their latest batches with ashes or leaf-mould, but the former often make the Kale dirty if the weather is wet, and through both the ashes and leaf-mould growth often pushes, and, becoming green from exposure, is hardly fit for the dining-table. Where roots from forced crowns have been cut into lengths for cuttings and have not the advantage of frame protection, but are laid in under walls, they must be examined after the thaw, as the soil often sinks, leaving them insufficiently shielded against later frosts. Nothing surpasses leaf-mould for covering, as it is warm and encourages early sprouting from the callused portions, and being porous allows the rain to pass away freely. Those who have not yet tried the Lily White variety should do so this season. It is especially useful for successional work, and is of a remarkably delicate colour and good flavour. The ordinary variety is best for early forcing, as it responds more quickly to heat. Ground for the reception of root cuttings to produce crowns for

early forcing next year, and which will be planted out in April, should be prepared as soon as possible to allow of settling. As a rule, I do not advise much rich manure to be dug in for this batch, spent Mushroom manure being preferable, several waterings with liquid manure during the summer being given. A warm sunny aspect should also be given. Strong manure, which induces a prolonged growth, is more suitable for batches which are not to be forced so early.

**ESCHALLOTS.**—The sooner in the month the plot intended for these can be got into a dry enough condition to allow of drills 3 inches deep being drawn the better, as if once covered with soil slight frost will not hurt them, and Eschallots prefer a long season of growth. As a rule this crop is grown under favourable conditions between rows of fruit trees or close by the margins of walks where the soil lacks richness. It is astonishing to what size individual bulbs of Eschallots will attain to if given a rich soil and sunny position. If the rows are about 1 foot apart and the bulbs themselves 6 inches, a mulch can then be given during dry weather, and overhead waterings of liquid manure occasionally. On heavy soils it is well to plant on raised beds, incorporating sufficient opening material to prevent basal rot and hand-weeding the beds during summer, as in the case of Onions. Mulehng in that case must not be practised, but broadcast sprinklings of some good rich fertiliser applied twice during the summer and in showery weather.

**JERUSALEM ARTICHOKE.**—Where these were not lifted by December and stored the late extreme frost will probably have proved too much for the tubers. The sooner in March the young off-sets which were separated from the eatable portion when lifted are planted the better. The ground need not be very rich, as if over-stimulated, tall stout stems and a superabundance of foliage follow at the expense of the crop. If, however, they have to be planted on the old site, good manure may be used, as overgrowth need not be feared. Sufficient room should be allowed between the rows to allow of the sun's rays gaining admission, from 15 inches to 18 inches being a good distance and 9 inches between each tuber.

**GLOBE ARTICHOKE.**—In many places these will have entirely succumbed, especially where mulching was not given in time or where this consisted of manure in a too advanced stage of decay. In a former calendar I advised an examination and a renewal of the protecting litter where necessary. This must now be removed, leaving only a small quantity round the bottom. All decayed leaves and stems should also be removed and the soil pricked over with a five-tined fork, some approved fertiliser being afterwards applied. Where blights have occurred they must be made up with off-sets from the parent stools. Seedlings are, as a rule, useless. Any off-sets that were severed from the old stools and potted up in autumn, being since then protected by frames, may be planted out on well-manured ground towards the middle of the month and afterwards mulched with short litter. Where there is plenty of room to spare 6 feet is not too far apart for Artichokes.

**TRIPOLI ONIONS.**—Early in the new year I advised going over beds of winter Onions and firming all those which were loosened by the high winds. Those who did so will now find the benefit of the practice. I have been looking over our own today and find that those most damaged by frost are loose at the base, being quite soft and decayed at that point. Rows that were only moderately thinned in autumn may now have their final thinning, those drawn out being planted on well-prepared ground in rows 1 foot apart and 6 inches apart in the rows. These will be rather later than the bulbs not thinned and form a good succession. Where young Onions are in demand for salading, a short row or two may well be left unthinned, these being drawn as required. I find the Trebon a capital Onion to sow in autumn, as it stands well in time of severe frost; indeed, better than most of the Tripoli section; bulbs in well in July

and is of fine mild flavour. As soon as transplanting is completed the Dutch hoe should be put through the beds and a moderate application of soot and guano given.

**SPRING ONIONS.**—In many instances the sowing of this important crop will be late this season, but the very first chance must be taken to get in the seed. Where the ground was prepared early in the year the principal preparation will consist in well scuffling the surface to the depth of several inches. This is best effected by five-tined forks. In addition to the soot incorporated at trenching time another good coating may be laid on before scuffling is commenced. This will aid in warding off attacks of the dreaded grub. By no means tread on the ground when in a wet or sticky condition; better by far wait a week or ten days longer. Where the ground has now to be prepared I would advise a departure from the ordinary method of trenching. Take out an opening to the desired depth at one end of the plot, wheeling the soil to the opposite end, and after spreading on a good thickness of semi-rotten manure, soot and wood ashes, proceed to throw forward the soil into the opening, well mixing in the ingredients as the work proceeds. By this means the Onions get the benefit of the manure from their infancy, which is just what they require. Although Onions require a firm surface, many mistakes are made in solidifying the ground. I have sometimes used the garden roller on light soils with advantage, but on heavy ones the practice may be ruinous, as the surface is so sealed up that neither air nor heat can penetrate, and where the bed is on an incline rain often runs away to waste instead of entering the soil. As a rule I prefer thorough treading to any other method, this being first done after the ground is levelled and before sowing the seed, repeating it when this is completed and treading first lengthways and afterwards crossways. A fine day should be chosen for sowing, the drills being drawn and allowed to stand an hour or two to dry before sowing. A foot apart is a good distance for the rows, although where ground can be spared 15 inches is a better distance. Thick sowing is ruinous, as during thinning so many of the seedlings are loosened, and never do so well after. This year, however, owing to the unsatisfactory condition of seeds in general rather thicker sowings ought to be made. Sowing completed, a covering of wood ashes should be given before the drills are again filled in. For early use the smaller bulbing varieties, such as Nuneham Park, Bedfordshire Champion, and Main-crop, are preferable, while such as Ailsa Craig, The Wroxtan, and Cranston's Excelsior, which continue to grow on later in the season, are all good sorts. Where Onions are preferred to Shallots for pickling, the small Silver Skin is about the best to grow for the purpose. These at thinning time may be left almost touching one another. If any spring varieties are being raised in heat for producing exhibition bulbs and the ground has not yet been prepared, it must be done at once. About the middle of the month any bulbs of choice varieties intended for seed should be planted out in square plots, so that they can be supported as growth proceeds.

**CELERY TRENCHES.**—These may be taken out as soon as opportunity offers, as then the intervening spaces can be utilised for planting out such things as Lettuce, Cauliflower, and Cabbage raised in heat. The manure also has then a chance to get into a good condition before the Celery is planted, supposing it to have been green when dug in. There is a prevailing idea that too much or too strong manure cannot be given to Celery, but this is a mistake, as a gross, sappy growth at the start means the same at the finish, such being prone to disease and rot and entirely void of flavour. I have had excellent results from the use of Mushroom manure, this inducing a hard and medium growth, which admits of being fed at intervals without the least fear of evil results. Wherever practicable plant in narrow trenches capable of holding only one row, these being better in every way than wider ones

for holding two, three, or more rows. In case of scarcity of ground wide trenches are unavoidable.

J. CRAWFORD.

### FRUIT HOUSES.

MELONS.—For early forcing of Melons I advise pot culture, and to get the best results have strong plants at the start, which should by this date be well up the trellis. They will soon require stopping to induce lateral growth. With pot plants it is not well to lose the first show of fruits after the stopping, as perhaps only two or three fruits may appear on the side or lateral growths. Where early fruits are desired two fruits will be better than four smaller ones a month later, and there will be no loss, as the crop, if cleared off quickly, will give room for a later one which will give a greater weight of fruit. If the plants have plenty of bottom-heat there will be less difficulty in swelling the fruits. Failing bottom heat by hot-water pipes, it is well to add new fermenting material to the old as soon as a good set is secured. As growth increases food may be given at every alternate watering in the way of tepid liquid manure and the surface roots top-dressed with rich soil and manure. More care will now be necessary to prevent cracking or decay of stem so prevalent with these plants. Some varieties are much worse than others in this respect. Those who have poor houses often suffer, and specially when a large body of manure is used. I find that the plants suffer much less when grown in pots if these latter are on a firm base. With careful watering and keeping the stems dry a sturdy growth results, and should decay appear cover the affected part with finely powdered charcoal with a small quantity of fine sulphur. Temperatures may be raised, that is as soon as a good set is obtained, 70° at night in mild weather being allowed and 5° to 10° higher by day. On cold, windy, sunless days 75° may be the maximum, as it is not wise to overheat the pipes. As we often get brilliant sunshine for a few hours daily this month, allow the thermometer to run up freely, as warmth by sun-heat is most beneficial. Give air sparingly and close by 1 p.m. to get full benefit of sun-heat.

SUCCESSION MELON CROPS.—Many cannot spare space for the earlier plants advised above, and commence to grow their first crop at the end of February or early in March, thus securing strong plants. Seedlings can be raised with less difficulty now than earlier in the year. Sow the seed in small pots, which should be placed in bottom-heat, sowing a couple of seeds in a pot and removing all but the strongest. For early summer use select a thin-skinned variety with a sturdy habit, not a long-jointed kind, as I find that the latter are not so reliable. For this purpose such varieties as Ganton Orange, Beauty of Syon, Blenheim Orange, the old Golden Perfection, and Eastnor Castle are noted for their free setting and early fruits; but in these days, when most growers have their own selections, it may be out of place to advise as to any kind, as the varieties are so numerous. If quality in these fruits be the aim of the grower, he will do well to keep to one kind in a house, as these fruits are fertilised so readily by insects that they get much mixed. A good Melon soon deteriorates when others are grown with it. Those who have modern Melon houses will not need much advice as regards the welfare of the crop. When the plants are started and due attention is paid to temperatures, there is less trouble than earlier in the year. The bed or rooting material should be prepared when the seed is sown, as then the soil will be in suitable condition for planting. Melons like a heavy loam or clayey soil, but not in great quantities, the best results being secured by a small root space, with liberal surface supplies of food, a narrow ridge or heap to each plant. If the bottom heat be manure, I would advise having slate or tiles of some kind under the soil that is on the manure, as this prevents the roots going into the manure. The soil when placed in position should be made firm, and plant at 30 inches apart. Plant firmly, staking and watering sparingly at the start. Also syringe

freely as growth is made, and stop the main shoots when the plants have reached the space desired or at the top of the trellis. Keep them free of growths up the stem till the trellis is reached, stopping as soon as they appear. As the lateral growth forms after the leader is stopped, tie in those well laden with fruit and stop at the third or even the second joint if the fruits are close to the plant, and endeavour to set the first fruits that show, treating as advised for early plants.

EARLY STRAWBERRIES IN POTS.—The early plants placed indoors in December or early January will now be at a critical stage. Some of the Vicomtesse H. de Thury section will be in full bloom and others just on the point of opening. Plants that have set their flowers should be removed to shelves as soon as sufficient fruits are set; indeed, they may be transferred just before they flower, as then there is less check. A drier atmosphere can be maintained and the flowers can be readily fertilised, this latter being done about mid-day when the pollen is dry. By removal to shelves with a freer circulation of air the stalk lengthens and the plants absorb more moisture. As soon as from nine to twelve fruits are set it is well to give more warmth and air, especially early in the day. When the sun is bright give tepid liquid manure freely and thin early, as the sooner those fruits left to mature are given all the energies the plants possess they will be larger and of better shape. As regards the number of fruit each plant should carry, much depends upon the strength of the plants, the variety, and if forced hard, from eight to ten fruits are ample if size and quality be desired. A few of the most forward plants of Vicomtesse Héricart de Thury may be given a warmer house than is usually advised, as this variety forces well in a Cucumber or Melon house on a shelf if syringed overhead freely, and a dish or two of fruits in advance of the first lot brought on more slowly will be appreciated. The above variety is one of the best to force hard if the fruits are set before placing in a forcing pit. When the early forced plants are colouring freely they will repay removal to a cool drier house. I have a small house devoted to these fruits for finishing, and the flavour when treated thus is little inferior to fruit gathered from the open; besides, there is a great gain, as the fruits keep longer and swell better. As the ripening period approaches manures must be omitted and the water at the roots be restricted if given a cool house, but dryness will produce sour fruit. After the fruit is gathered the early plants will be excellent as autumn fruiters if shelter in cold frames can be given for a time, when the plants can be planted out in May, giving them ample supplies of moisture when required. Vicomtesse H. de Thury is an excellent variety for fruiting in September if saved after forcing and planted in rich soil at time named.

SUCCESSION CROPS.—There will now be less difficulty in forcing these, and I find such varieties as the new Royal Sovereign, La Grosse Suerée, Anguste Nicaise, Keens' Seedling, President, and Sir Chas. Napier are all excellent for succession crops and are forced in the order named. Royal Sovereign did splendidly last season and looks promising this. La Grosse Suerée is excellent for home use, but not so good for packing, and the value of this variety is its good cropping, with noble looking fruit. Before introducing Strawberries where they are to be forced, remove all decaying matter, cleanse, and give a thorough soaking of water. For succession crops, such the best results are obtained by slow forcing, so that if fruits are wanted for a certain date, allow a week or two longer than the time required, as by slower forcing better results are secured. The advice given above as to finishing the fruits is of equal importance for later crops. With more sun the plants will now absorb more moisture, and I find it is excellent to give an occasional watering of liquid manure before the plants flower, as this strengthens the spike, but once a week will suffice. On the other hand, I do not top dress, as often advised. Many plants are ruined at the flower-

ing period by green-fly, and this pest multiplies rapidly at this season, so fumigate every fortnight up to the time the plants are in bloom two nights in succession. By this means it will not be necessary to fumigate so strongly at one time. Frequent syringings overhead will maintain a healthy leaf-growth, and by shutting up early and damping overhead freely there will be little trouble with red spider, one of the worst pests Strawberry forcers have to contend with. After the fruits are set the flies are not so harmful, one or two good fumigations generally being sufficient. Plants required for later crops that have been wintered in houses or frames should not suffer for want of moisture. If in dry fruit houses, water them overhead freely. These plants should never be dry at the roots, and if in a dark place, lose no time in giving more light, as the trusses will be weakened if not freely exposed as the sap is on the move. G. WYTHES.

## DESTROYERS.

### FLOWER GARDEN PESTS.

THE pests in a flower garden are almost as numerous as the flowers themselves; nevertheless, there are some kinds which are much more injurious than others. Last year, as far as my experience goes, our gardens suffered comparatively little from injurious insects, with the exception of earwigs, which were more than usually troublesome and abundant. Of all the insects, perhaps, which do the most damage in gardens the various kinds of aphides, which are commonly known according to their colour, as green or black fly, I think stand first, not only from the amount of injury they do to plants by sucking the juices of their leaves and tender stems, or by their dropping the honey-dew which they secrete on to the leaves, and thus choking up their pores, but also from the very large number of plants which they infest. In fact, there are few which do not suffer more or less from the attacks of some member of this family. Those, however, which belong to the natural orders Funariaceæ, Gentianaceæ and Iridaceæ are said to be entirely free from them, and labiates and cryptogamic plants nearly so. One of the peculiarities of these insects is the extraordinarily rapid manner in which they breed, a plant being apparently free from them one day and a few days afterwards being completely smothered by them. This is not quite so strange as it seems at first sight, when we realise that an aphid will give birth to two live young ones within the space of half an hour, and that these young will probably begin in the course of three or four days to increase their species at the same rate.

One of the commonest species is the well-known green-fly of the Rose (Siphonophora roseæ). Few if any Roses are exempt from their attacks, but the Tea-scented kinds generally suffer less than the others. Dahlias, Verbenas, and Asters are also infested by this species. In seasons which are favourable to this insect it seems almost impossible to keep Roses out of doors free from them, as these insects breed so very fast. The most important thing is to take steps to thoroughly clean the plants as soon as any are detected on them, on the principle that "a stitch in time saves nine." Plants almost without number have been suggested for keeping this insect in check, but there seems to be no royal road to the accomplishment of this end, and whatever means we use must be persevered in until we accomplish our object. If only one plant is infested and that not to any great extent, brushing it where the insects are

with methylated spirits of wine, benzine, or water in which paraffin oil has been mixed at the rate of one wineglassful of oil to four gallons of water is very efficacious. When a more general application of some insecticide is required, syringing the plants or spraying them with one of the various forms of spraying machines is the best remedy. These machines, though more expensive than a syringe, are far more economical as regards the amount of insecticide used, and it likewise applies the liquid in a more uniform manner. When dealing with aphides, it is important to use soft soap, or something of a greasy nature, in order that the fluid which is used may not run off them like water off a duck's back. One of the simplest and most efficacious remedies is the extract from 3 lbs. to 4 lbs. of quassia chips, 2 lbs. of soft soap, well mixed together, and added to 50 gallons of water. Another very good remedy is dilute paraffin emulsion. This is made by mixing together a pint and a half of condensed milk and 3 pints of water, then add 1 gallon of oil, and churn them until the whole solidifies and forms a kind of butter. This butter should be diluted with from twelve to sixteen times its bulk of water, and should then be used at once. The chief drawback to using paraffin in any form is to prevent it separating from the water and rising to the surface. When this happens it will either be applied too weak or too strong, but when the paraffin is made into an emulsion there is little chance of this danger, as the ingredients are so thoroughly mixed. Another very useful recipe is, to 7 lbs. of tobacco add 1 lb. of soft soap, and boil them well together in 5 gallons of water, and then strain the mixture, and to every gallon add 36 gallons of water before using. The natural enemies of the green fly are numerous. The grubs of the common lady-bird, of the lace-winged flies, and of a very common fly with a black and yellow-banded body, which may often be found hovering in the air near trees in gardens on sunny days, and there are various birds which devour them. Perhaps their greatest foes are certain small parasitic flies nearly allied to the ichneumon flies which lay their eggs in them; the grubs hatched from these eggs kill their hosts by feeding on them.

Thrips is another very common pest, which is, however, as a rule, more injurious to plants under glass than to those in the open air. They are not so very easily detected as they live on the undersides of the leaves. They may be destroyed by the same insecticides as green-fly, besides which 2 ozs. to 3 ozs. of Gishurst compound to a gallon of water, with a little tobacco water added, is said to be a very deadly remedy. Though thrips do not breed in such an extraordinarily rapid manner as aphides do, still it is very essential to thoroughly cleanse a plant as soon as it is found to be infested.

Earwigs are another very troublesome pest. Dahlias, Chrysanthemums, and Carnations are their principal victims in the flower garden. The only practicable way of destroying them appears to be by trapping them. The best traps are pieces of crumpled-up paper put into small garden pots or the hollow stems of Beans, Artichokes, or Sunflowers; the latter are particularly useful, as they contain a certain amount of a sweet lining to the hollow stem. These traps should be examined every morning, and the person who undertakes to empty them should provide himself with a bowl partly filled with water on which some paraffin oil has been poured, so that the insects when shaken into it will be soon killed. The earwigs may very easily be blown out of the hollow stems into

the bowl. The traps should be placed near the flowers so that the insects may easily find them.

G. S. S.

## STOVE AND GREENHOUSE.

### STRIKING CUTTINGS.

ON p. 58 is pointed out the advantage of propagating one's stock of Chrysanthemums from plants that had been grown naturally rather than from those that had been highly fed, even though the shoots of these last might be stouter than the others. The writer quotes an instance that has come under his notice in proof of that assertion, and with the entire article I thoroughly agree; indeed, I should be inclined to go much further and apply the remarks not only to Chrysanthemums, but to plants in general. It will be found in the case of all plants that have been developed under the stimulating influence of any of the highly concentrated manures now in such general use that their progeny, though bulky in appearance, are wanting altogether in the stamina necessary for building up a permanent healthy specimen. Such subjects as Pelargoniums, Heliotropes, Fuchsias, Petunias, and other plants of this nature will not grow kindly if propagated from overfed parents. In another respect, too, this high feeding appeals strongly to the propagator, and that is the cuttings from such plants are far more difficult to strike than if they are produced on plants that have not been so heavily manured. This was brought prominently under my notice some fifteen years ago or thereabouts, when the white-flowered Bouvardia with double blossoms, Alfred Neuner, was first sent to this country. As large a stock as possible in a short time was the object aimed at, and the first two or three crops of cuttings from the imported plants struck root readily enough. Then just as the plants commenced to push out other shoots, a pinch of concentrated manure was given with the object of hastening growth, which succeeded perfectly, but at the same time another stumbling-block arose, for when the shoots so produced were taken as cuttings, many altogether failed to root, while those that did strike stood a long while before doing so. Since then I have tried many experiments in striking cuttings, all of which have pointed to the fact that cuttings from overfed plants are not only far more difficult to strike, but even when rooted they are often less satisfactory than those propagated from plants grown in a more natural manner. Many instances have come under my observation of late years, not only in my own practice, but also in that of others. One case which I particularly noted was an attempt to work up a large stock of *Coprosma Baueriana variegata* from comparatively small beginnings. The cuttings of this were struck, potted off, and as soon as sufficiently large the tops of the young plants were taken as cuttings. This went on until a considerable number was obtained, and one day a large batch of cuttings was taken which, though treated the same as had always been done before, refused to root, or at all events very few did so in a satisfactory manner. I was consulted on the matter, and a few inquiries elicited the fact that the young plants had all been given a pinch of fertiliser to force on the production of shoots, which so far succeeded, but finally resulted in greatly checking the increase. It was quite six months before these young plants resumed their normal state, and propagation went on as before. Even in the case of plants that have not been unhily fed the stout succulent shoots do not strike root so readily as the weaker short-jointed ones, and this fact should be especially borne in mind when the subject is difficult of increase in this way from whatever part of the plant the cutting may be taken. For such things the best cuttings, as a rule, are furnished by the side shoots that have been well exposed to the light and not those borne in the centre of the plant. Of

course, in the case of plants with a decided leader such as *Arancarias* cuttings of the side shoots are useless, as they never form a symmetrical specimen. Of hard-wooded plants, some of which are notoriously difficult to strike, it will be often found that the best results are obtained by those near the edge of the pot, and when covered with a bell-glass I have often noted that should a cutting or two be pressed down by the edge of the glass it will be rooted before any of the others. T.

**Libonia floribunda.**—At this season of the year large specimens of this plant, 2 feet in height and as much through, with healthy, dark green foliage, and covered with tubular blooms of vermilion and yellow, are among the most striking occupants of the conservatory. The *Libonia* is at present, unhappily, quite out of fashion, it being a rare thing now-a-days to see it really well done, but there are few subjects that fill the gap in blooming plants during the first three months of the year so satisfactorily and enduringly, provided adequate attention is accorded. Its great enemy is red spider, and an arid atmosphere during the summer invariably induces an attack of this pest. Cuttings should be struck in heat, a propagating frame for choice, in February, potted as soon as rooted, and shifted on during the spring and early summer, taking care that the shoots are well stopped to lay the foundation of a bushy and symmetrical plant, after which they may be stood in a frame until October, when they should again be housed. During hot weather the foliage should be kept healthy by frequent syringings, which is a *sine qua non* that is seldom observed, the neglect of this practice resulting in the leaves being scanty and of an unhealthy hue, as is the case with the majority of plants one sees. Large pots should not be used, but nutriment in the shape of liquid manure and soot-water applied at frequent intervals. The system of planting out during the summer is not recommended. Large specimens, that at this period are most valuable for effect, can be grown from the cutting in three years, but year-old plants, when well flowered, are very effective. Fibrous loam and sand with the addition of a little peat form a good potting medium.—S. W. F.

**Roman Hyacinths.**—I, too, have found the blooms of Roman Hyacinths exceptionally numerous and of fine quality this season. The general plan of preparing the bulbs for forcing is to plunge them in cocoa nut fibre refuse, ashes or sand for a period of six weeks or so after potting, with the view of encouraging a free root action. This plunging is not at all necessary. If the bulbs are planted rather thickly in ordinary Geranium cutting boxes, exposing the crown or neck of the bulb, and standing out of doors without any protection from rain whatever, only covering them in the case of frost, equally satisfactory results will be attained.—E. M.

**Poinsettias in summer.**—After many years' experience I have come to the conclusion that dwarfer and better plants generally of this fine winter-blooming subject are produced by frame or pit culture from the end of May to the middle of September than when they are kept growing in intermediate or even cool houses. In the former quarters growth invariably becomes leggy and soft, while the foliage is under-sized. In cool houses the temperature fluctuates too much to suit Poinsettias. The plants enjoy a quiet moist atmosphere with plenty of air, but no draught. This is best afforded in pits and frames, the plants standing on a cool ash bottom. One thing, however, is necessary, namely, closing the frames each afternoon so as to husband a little sun heat. The pots should be well drained, as the roots of Poinsettias are very impatient of too much moisture. More so is this the case towards autumn, as the nights become cooler. After housing, a temperature of 60° or 65° suits them well, and a stimulant of a mild character is beneficial two or three times a week. The most remarkable batch of young Poinsettias in a growing state I ever saw was at Carrow House, Norwich, the residence of Mr. J.

J. Colman. It was at the beginning of September, 1893. The plants, planted out in a brick pit and treated in the manner above described, were a picture of health and vigour, having stems of great thickness and extra large leaves. On asking Mr. Jones, the gardener, how these plants behaved when lifted, he replied, "by being kept close for a week after potting only a few of the very lowest leaves fall off, and we get excellent flower-heads."—J. C.

**Nertera depressa.**—In summer when this interesting little plant is thickly set with its bright orange-scarlet berries, it is sure to attract attention. It is quite an exceptional plant in its way, possessing little or no beauty except when its berries are so brightly coloured. Years ago I grew hundreds of this plant in small pots which met a ready sale when the berries were ripe and coloured. As the plant flowers early in the year, it is best increased by division at once, so as to encourage an early growth and a greater number of blossoms. These latter are of a greenish hue, and appear in the axils of the leaves. The plant grows freely in light, sandy loam, with fine brick rubble added liberally. In potting keep the plants on a level with the top of the pot, so that a mound-like form may result when growth ensues. Afford plenty of moisture overhead during the growing season. For general work 5-inch pots are a very useful size to employ, though pans of larger size are also very effective. It may be well grown in a cold frame, and in such I have wintered many hundreds of plants with impunity.—E. J.

#### LISIANTHUS RUSSELLIANUS.

WHEN looking over the seed-growing establishment of M. Ernst Benary at Erfurt two or three years ago M. John Benary exhibited with conscious pride a houseful of *Lisianthus Russellianus* in full flower and in splendid condition. They were grown to produce seed, and the profusion of bloom was admirable. I have to go back to the year 1851, when similar plants in flower were grown by Mr. Green, of Cheam, Surrey, who exhibited them in London previous to or about that time. Mr. Green exhibited a plant with five hundred blooms expanded on it. None of M. Benary's plants were equal to this fine specimen, but it showed what could be done by well-directed skill and attention to details. I was so impressed with the beauty of this plant some thirty years ago, that I purchased a packet of seed and raised a fine lot of plants from it. It is a biennial, and the seed costs about a shilling a packet. The flowers are in form like a small Tulip and of a distinct violet-blue colour, so that the beauty of a plant with five hundred fully expanded Tulip-like blooms each of a violet-blue colour—may be imagined by those who have not seen it. These old flowers are to many young gardeners practically unknown. It is a larger genus than many persons are aware of. There are upwards of fifty specific forms enumerated in the "Index Kewensis," some of them, of which figures are extant, being of no great beauty. *L. pulcher* is a distinct and rather beautiful species which I have not seen in flower, but it is well figured in the *Botanical Magazine*, tab. 4424, from a good plant grown in the hothouse of Messrs. Lucombe and Pince, of the Exeter Nurseries, in 1848. Seed was advertised of it some years ago, but I failed to get any plants from it. The plant has a near resemblance to a scarlet Pentstemon. *L. Russellianus* is also well figured in the *Botanical Magazine*, tab. 3626, and there we gather that it was sent home from Texas by Drummond in 1835, who says it was "not excelled in beauty by any plant." It was named in honour of the Duke of Bedford, who at that time was a great patron of gardening.

I used to grow annually two score or more of these plants in 9-inch pots, and they were very valuable for furnishing the greenhouse in the month of August. The seed may be sown in April to get good strong plants. It is small, and should be sown on a smooth surface and just covered with fine white sand. It vegetates in any forcing

house with a temperature of 55°. A square of glass is laid over the mouth of the pot or seed-pan to keep the soil in a moist condition. Prick the plants out in small pots as soon as they can be handled, to be planted one into a pot later. About the end of August they will be large enough to repot into 4 inch or 5 inch flower-pots, and as the cold weather comes on they must be placed in a heated house. I have always wintered my plants on a shelf near the glass roof in a temperature of 55 to 60°. They do not require much water in winter, and what they do need is applied to the roots by dipping the pots in water, so that it moistens the soil through the hole in the bottom of the pots. Drain the latter well, and grow the plants in good yellow loam and fibrous peat in equal parts, a fourth part of decayed cow manure and coarse sand to keep the compost open. Repot them in February into 7-inch flower-pots, and as soon as they are well established, which will be by the end of April, they may be repotted again into 9-inch pots. Mr. Green grew his large specimens in 18 inch pots, which are needlessly large and most unwieldy objects to move about from one place to another. As the plants grow they must have the points pinched out of them. Careful watering is also necessary at all times, especially in winter, as many of them have a tendency to die off at the neck. In summer they do well in any unheated house or pit, such as they were growing and flowering in so well in M. Benary's seed grounds at Erfurt.

J. DOUGLAS.

**Rhapis flabelliformis.**—Of some Palms, such as *Kentias*, *Arecas*, *Latantias*, *Cocos* and *Phoenix*, large quantities of seeds are sent to this country, and being grown for decoration they are met with almost everywhere; but seeds of this *Rhapis* are rarely to be obtained, hence it is usually increased by division, which can be successfully carried out in the case of this Palm, as, unlike most of its class, suckers are produced pretty freely. If the operation of separating them from the parent plant be carefully carried out, the loss will be but slight, though the *Rhapis*, like all other Palms, resents being disturbed at the roots. It is a good plant for the dwelling-house if kept clean, which last item is very necessary, as the leaves are rather rough and the dust adheres more readily to them than to many other Palms. This *Rhapis* is a native of Japan and requires only greenhouse treatment; therefore it may be employed in positions that are too tender for more delicate subjects. Though a greenhouse is all that is necessary for their well-doing, yet the young plants will make more rapid progress if given the heat of a stove. A miniature form known as *Rhapis humilis* is a charming little Palm, but needs rather more heat and attention than the stronger grower. I have seen a form of *R. flabelliformis* with variegated leaves, but it often shows a considerable tendency to revert to the normal kind.—H. P.

**Azalea obtusa.**—This is a very pretty little Azalea, which by some would be preferred to the larger-flowered forms, though to many the production of very large blossoms is the one object to be aimed at. *A. obtusa* forms a dense, freely-branched little bush, clothed with leaves somewhat larger than those of the well-known *A. amena*, while the flowers are also of increased size. In colour they are a kind of orange-red. There is also a variety with white blossoms, which doubtless originated as a sport from the typical kind, as occasionally a red flower will make its appearance among the white ones, and still more frequently some of the white petals will be more or less striped with red. This Azalea is without the hose-in-hose conformation of the flower so conspicuous in *A. amena* and some other of these small-flowered forms. It is particularly noticeable in *A. calyciflora*, for in this the calyx segments are enlarged and coloured the same as the flower, thus presenting exactly the appearance of one flower within another. *A. calyciflora* is, except in the double blossom, so much like *A. obtusa*, that in all probability it is but a variety

thereof. All those above mentioned, as well as *A. amena* and the various hybrid forms claiming parentage from it, force readily, and after they have been treated in this way for two or three years they may without difficulty be had in bloom by Christmas. Azaleas of this class strike very readily from cuttings, and plants obtained in this way are much preferable to those propagated by grafting, as they are naturally of a dwarf, bushy habit, and are totally out of place stuck on a long naked stem.—T.

#### MONOTONY IN GARDENS.

PERHAPS the most grievous source of wasted effort in gardens is monotony arising from everybody growing what his neighbour grows, so that we lose many chances of variety. Thus it comes that the nurseryman who grows new or rare trees or shrubs often finds them left on his hands, so that many country nurseries only grow a few stereotyped things, which means monotony to gardens. For instance, we see public gardens and squares in London given over to the common Privet, the neglected Lilac, and the common Elder, as in Lincoln's Inn Fields. The temptation is strong on the part of trade growers to keep only things that people want to grow freely, and to recommend things, like Privet, which are without beauty, and offensive in odour when in flower. The presence of such things is one of the causes of the miserable aspect of the shrubberies in many gardens, which might be very beautiful with varied life. The presence of many shrubs of little beauty often destroys by their vigour the rare and beautiful garden vegetation, so that we have not only the ugliness of a brake of Laurel, or Privet, or Pontic *Rhododendron* to survey, but often the fact that these things have overrun and killed far more precious things. And this nursery rubbish having eaten up every good thing begins to eat up itself, and hence we see so many shrubberies worn out. Lovers of the garden could do something to check this fatal tendency to monotony by taking up some family of plants for themselves which perhaps they are unable to find in the nursery gardens near. It is not only beautiful species of plants which are excluded from ordinary nurseries, but even special nurseries, as for Roses, will often exclude good things from their collections. It would be too much to expect that the enormous number of Roses grown should be grown by any one man, or even by any half-dozen growers; but the fact remains that even nurseries devoted to special subjects may be too exclusive. We say so much to show that even in the branches of gardening that seem best known there are neglected sources of interest, while among little-known plants there are many. But it is not only the introduction of new plants or species we have to think of here, but other things equally important: the raising of new forms (hybrids or varieties), the fine cultivation of interesting groups, as the beautiful forms of our native Primrose by Miss Jekyll; the making more artistic use of old and well-known plants; the skilful adaptation of plants and trees to the soil so as to get the highest beauty of which it is capable without excessive care or cost, and without the mourning and death that are visible in many places after hard winters. It is necessary to form true ideas of trade limitations, as many people seem to think that the nearest nurseryman possesses all the known art of gardening, and has all the plants worth having; whereas he probably is in a very narrow groove as regards either of those subjects. Therefore, those who seek to vary the monotony of gardens



must be prepared to face some little trouble, and not take the least notice of what is considered right in the neighbourhood, or what can be obtained from the nearest nursery garden, or even some of the larger nursery gardens. The further afield they look, probably the better in the end it will be for them if they would escape from the trammels of monotony. At the same time, if local men have good things they ought to be encouraged. It is a misfortune for gardens that there are not more local nurseries of an interesting character, because they would be the very best basis on which to see what local circumstances will best admit of.—*Field.*

## KITCHEN GARDEN.

### INSECT ENEMIES TO PEAS AND BEANS.

I THINK I may safely assert that all the leading seedsmen exercise very great care in examining all Peas and Beans before sending out to customers, carefully excluding any that may appear unsound or indicating insect attacks. Many small retailers of seeds ask gentlemen and their gardeners why they do not purchase from them, as they can supply equally as good seeds as the big houses and at a much lower rate. The latter may be true, but as to the seeds being equally as good is more than doubtful, which can be proved by comparison, and in the vast majority of instances it will be found that the cheap seeds have been a false economy. In the case of Peas and Beans this will be found especially true, by the introduction of insect pests into the garden. Of these amongst Peas, the Pea beetle (*Bruchus pisi*) and the striped Pea weevil (*Sitona lineatus*) are the worst. Peas infested with the beetle named can easily be detected through the holes made by the grubs, and should on no account be sown, but burnt at once, thereby minimising the danger of attack as much as possible. The striped Pea weevil is a much more serious enemy to combat and does more damage, as unless its ravages are checked, it will frequently destroy the plants. Some four years ago I had to contend against this foe, and could not imagine what was the matter with whole rows of Peas just staked, which, instead of growing well, appeared likely to vanish. On examining the under sides of the leaves I discovered the weevils in a fully developed state, and also larvae of the same, both feeding on the foliage and shoots day and night. Dusting with lime, soot, &c., had only a slight effect in preventing their ravages. What seemed to have the best result was repeated applications of liquid manure, and working into the soil with the Dutch hoe a light dressing of fish guano. It is possible that the manures were objectionable to the insects as well as stimulating to the Peas, but by one or both those causes fair crops were secured, although not so good as if no injury had been done by insect pests. Deep and thorough cultivation is also advisable to prevent further attacks, and even then it may take a year or two to eradicate it, even when the Peas are sown on fresh ground, as is usually done in most gardens. In my case it took two years to accomplish its extirpation.

The Bean weevil (*Bruchus granarius*) is evidently becoming more general, as out of various lots of Broad Beans obtained from several notable firms during the past few years every packet has had Beans therein infested. However, if all such Beans (which may be detected by the orifice) are burnt, only sowing

the sound ones, no unsightly breaks will occur in the rows through not putting in damaged seed. Last year our Broad Beans had a few strange caterpillars on them. On sending some to a well-known authority on such matters I was informed that they were the larvae of the gamma moth, and was strongly advised to carefully hand-pick the infested plants, otherwise they might increase to such an extent as to inflict serious damage to that kind of crop. In face of the many and apparently increasing quantity of insect foes that we have to fight against annually, it should be palpable to all that seeds should only be obtained from those firms who strive to send out clean stocks, that will not only be a credit to them, but also satisfactory to growers, by germinating freely and not prone to the enemies mentioned.

W. G. C.

**Radishes for forcing.**—These, if a proper selection be made, may be sown amongst Potatoes planted in frames. It sometimes happens when the old varieties of Turnip Radish are selected that they get smothered by the Potato haulm before reaching a size fit for use. This would not happen if one of the recognised forcing kinds were grown. Of these I find the Early Scarlet Forcing is the best, as the top growth is small and neat and the roots form very quickly. If a long kind is preferred, Wood's Early Frame will be found the best that can be grown, but for growing amongst other crops I certainly prefer the Turnip-shaped variety mentioned above.—J. C. TALLACK.

**Parisian Forcing Carrot.**—This is far ahead of any other kind of Carrot for sowing on hotbeds at this time of the year to get an early supply. Until I first grew this I used to depend on the old French Forcing for sowing at this time of the year and also for sowing in August in frames, but the Parisian Forcing comes in much more quickly. From a sowing made on February 7 last year we commenced pulling for use on May 1, and this from a hotbed only protected by spare lights being propped over it and without any side protection whatever. I prefer this plan to that of using frames, as the young plants are not then so liable to get drawn. They like warmth underneath, but do best when very little protection is used for the tops. I find that roots of these small kinds are more appreciated than those of larger kinds, and by sowing at intervals a supply is kept up the year round. The latest sowing is made in the pits used for Potato forcing, and the roots from this sowing, if lifted now and stored in sand, will keep plump and good till early sowings are fit for use.—J. C. TALLACK.

### EELWORMS ATTACKING TOMATOES.

EELWORMS are very difficult to combat with, but unless they are got rid of or kept under, the crops of Tomatoes are bound to be light. Preventive measures are most necessary in all cases where they have proved troublesome in previous years. If in the autumn F. Miles could have emptied his hot-water pipes and set the house wide open, he would have found gaslime the cheapest, safest and most effective remedy that could have been applied, and frosts also would have done good. Instead of going to the expense of removing the top spit of soil the border might have been double-dug, or, if the second spit is fairly good, completely trenched prior to receiving a dressing of gaslime, applied at the rate of half a hundred-weight to the square rod. For six weeks the gaslime ought to have remained on the surface, and be then forked into the ground. Why I do not advise using it now is because it is somewhat poisonous in a fresh state, and must be exposed long enough to get rid of some of its injurious properties. It might yet be tried, but at this late date a quarter of a hundredweight would be enough for a square rod of border, and after a week or ten days' exposure be forked in, planting

following in the course of another week, or longer if it can be delayed without unduly weakening the plants. Corrosive sublimate I have never used: it is a strong poison and said to dissolve the most readily in hot water. With this F. Miles might experiment on a small scale and note the results before running serious risks. Soluble phenyl I have used rather extensively with good results. This will be found a somewhat expensive remedy, especially if it is the roots and not the stem that is attacked. If the former are affected they soon become almost useless as far as supplying crude sap to the plant is concerned, and will be found on pulling up a flagging plant to be much clubbed or knotted. Before eelworms become established in the roots a thorough soaking of soluble phenyl should be given, and as this must only be diluted at the rate of one pint to eighteen or twenty gallons of water, it will be seen that a considerable quantity will be required for a large house. Another species of nematoid worm, or *Heterodera*, attacks the stem just below the surface, and are not so very long before they completely cut off all communication between the roots and the plant above ground, flagging being the first sign of attack. Once flagging commences there is no saving the plant, and it may as well be pulled up and burnt at once. In this case watering with the diluted phenyl close up to the stem so as to moisten all round the buried portion is a good preventive. It should be commenced before the plants set any fruit, and be repeated at intervals of about three weeks. If only a comparatively few plants are growing, I should advise baring the stems as deeply as can be done without damaging many roots, and well moistening with diluted phenyl prior to returning the soil on to the top of or up against the mess, the latter to be re-moistened with the phenyl occasionally. F. Miles can procure the phenyl through a local chemist, and should insist upon reduced rates being charged for large quantities if taken. Soluble phenyl is not prejudicial to the growth of Tomato plants, but rather the opposite. Chemical manures accompanied by abundance of water will also serve as a deterrent of eelworms, and it need hardly be added that a strong yet sturdy habit of growth is desirable in every way. W. I.

### NOTES ON LETTUCES.

ON page 80 "W. G. C." advises a limited assortment of well-tried Lettuces in preference to devoting time and space to those of doubtful merit. I can fully support him in his views. All the varieties named except Little Queen are well known and popular sorts, but I would venture to add one or two others which have done well with me after several trials. For forcing in frames and pits I prefer either Veitch's Golden Queen or Sutton's Commodore Nutt to the Early Paris Market for two reasons, namely, size and early maturity. Either of these two sorts matures more quickly than the Paris variety under the same conditions, and, being smaller growers, they can be sown or planted more closely together, which is a gain in frame culture. Beyond this I have not a word to say against Early Paris Market, as it is undoubtedly a very fine variety in every way, but its value is greater as an early outdoor and successional sort. I like to have some of the two first named for the sake of colour, one being green, and the other, as its name implies, of a golden tint. Both are equally good in quality and make firm little hearts, which, grown under glass, are so tender that they bruise if subjected to the least suspicion of rough treatment. For summer work Veitch's Perfect Gem is invaluable and without a rival, and where variety is needed, Neapolitan and Sutton's Favourite are capital kinds with distinctly crimped edges to their leaves. They are slow to run to seed, which is a consideration in summer. Stanstead Park grows to a good size and is a distinct Lettuce, but with me when first tried almost every one bolted, and I have discarded it. Daniels' Con-

tinuity and Marvel represent another section of Cabbage Lettuce, and where variety is desired they can both be strongly recommended for delicate flavour and long-standing qualities. Those who prefer a less crisp leaf than that furnished by Paris Cos or the selected Superb White Cos retained by all good houses should try Carter's Mammoth. This, as its name implies, assumes large dimensions, and also requires tying up to thoroughly blanch the heart and inside leaves, and this is the only drawback, I think, that can be attributed to it, particularly where labour is stinted. In texture it resembles to a large extent the Cabbage section, and this, coupled with its size, gives it a foremost place. It is a good market variety and stands hot weather well. Of winter Cabbage Lettuce there is none to excel the Hardy Hammersmith, and this has no value after the spring-sown plants are ready for use, and it is surprising how quickly they may be had at the foot of sunny walls from an indoor sowing, planting out as soon as strong enough to handle. From the same positions the Hammersmith can be cut throughout the winter, except in very severe weather, from August sowings. It is the hardiest and best in its section for winter work.

W. STRUGNELL.

## ORCHARD AND FRUIT GARDEN.

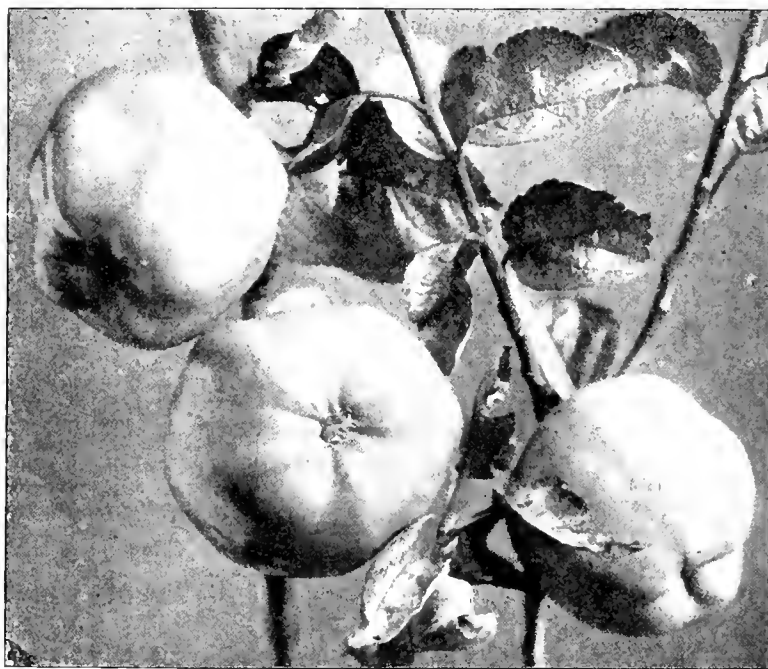
### GOOD COOKING APPLES.

ONE of the best cooking Apples is Lord Derby, which is illustrated, as this cooks and crops well, succeeding where others fail. It is a splendid town fruit, growing and cropping well under adverse conditions as to soil and climate. We have far too many varieties, the majority of poor quality; but the trouble is to select the best. The variety Lord Derby should certainly have a place. Amongst those Apples that will give a supply from September to May are the following. For early use it is well to plant such as Manks Codlin, a sure bearer and excellent as either a bush or pyramid. It is not a large grower and never fails to crop well, being fit for use very early in the season, cooking well and providing the table in advance of other kinds. For orchard culture as standards the well-known Keswick Codlin may always be relied upon, but it has a few faults, the greatest being it crops so freely, that many of the fruits are small. Where this is grown it is well to thin severely, and if only small trees are desired I would give the Manks preference. To follow this when cropping and other qualities are considered Lord Grosvenor is a very good selection, and in season from September to November. It is a large fruit of the Codlin type, a robust grower with large foliage, and a fine fruit either for market or private use. I have grown this variety when such kinds as Lord Suffield or Cellini failed, and, carefully handled when gathering, it may be had good up to Christmas. Cellini Pippin is a great favourite of mine in bush form, and I include it in my small selection, but it does not grow so freely in some soils as one could desire. In Gloucestershire and the surrounding counties it was our best all-round October fruit, its very handsome colour, acid flavour and free-cropping qualities making it a profitable variety and one that can be used for dessert if required. Of late years I have noticed a great tendency to canker with this variety, so that in planting it it is well to study the stock on which it is grafted, so as to get a clean growth, and in many soils I have seen it do better as a standard. In this form there is greater freedom of growth and less canker.

For mid-season or December use there are few better types of fruit than Lord Derby, and,

as shown in the illustration, it is a handsome fruit, large, angular, greenish-yellow, and of first-rate quality, a great bearer and a variety that rarely fails to crop; the tree is a strong grower and a splendid orchard variety. I have kept fruits well into the spring when given cool storage, but do not advise it for late use, but for mid-season supplies. New Hawthornden is a good variety for early winter use, and one of the best to crop in a young state and good in bush form. A large, handsome fruit of brisk flavour and a great favourite in the kitchen, this is also a good market fruit, and well repays good cultivation. Annie Elizabeth may be classed as one of the best varieties for gardens near towns or in poor soils; in standard form it crops grandly, and keeps sound well into March; indeed, by gathering late and giving cool storage, I have kept this variety for eight months. It is a large conical fruit, with firm flesh and first-rate quality. It has a brisk flavour and fruits regularly. I now come to a newer intro-

duction, I find a most reliable late fruit. This is in season well into May; the fruits are large, flat, dark green, firm, acid flavour, and streaked or flushed with bright red on the sunny side. This variety gathered late retains its good flavour to the last, and is a good cropper, grand as a bush or pyramid, and one well worth including in a select list. The well-known Dumelow's Seedling or Wellington does not thrive in all situations, but it has few equals as a late variety with me; it fruits freely enough, but the fruits are so spotted, that they soon decay, so that it is well to give it a limited space. Where it thrives it is a splendid cooker, good as a standard and much liked in the kitchen, and a heavy cropper when grown on the Paradise stock in a dwarf form. Those who do not select this may with advantage grow Newton Wonder, a valuable kind, in season in May, and much resembling the Wellington in keeping and cooking qualities. This latter is a new variety, but, so far, young trees have given very



*Fruiting branch of Lord Derby Apple. From a photograph sent by Mr. Norman Blake, Bedford.*

duction, and one noted as the best of its class, Lane's Prince Albert, and though it is now close upon forty years since this variety was first sent out, it is only of late years that it has found so much favour among all classes of growers. I do not know of any variety more profitable and a better cropper in any form; even two-year-old trees are so laden, that they have to be supported. The value of this fine variety was fully explained in these pages some few years ago, and since that date it is more popular than ever, and being a late handsome fruit with splendid cooking qualities, it is one that should be included in a limited collection and is in season during the spring months. As regards habit of growth it is somewhat pendulous, and with a heavy crop requires support. When grown in a bush form it should have space, and to prevent too free fruiting I have planted trees on the natural or Crab stock, which bear very fine fruits and are preferable to those on other stocks. Bramley's Seedling, another variety of recent introduc-

tion, Alfriston may be termed a late Lord Derby, as it is much like it as regards size, colour, and other good qualities. This is one of our best croppers, very large, late, and of acid flavour, firm flesh, and close, strong growth. With me it rarely fails, and we have trees in all forms and ages, our best fruit being secured from bush trees, and these latter rarely fail to fruit. There are others doubtless equally good as those named, but the above I consider most reliable when cropping and cooking qualities are considered.

G. WYTHES.

**Small Pears.**—The remarks of "W. G. C." (page 94) on small Pears of good flavour are not only interesting, but very useful, especially to those about to plant and whose knowledge of the merits of the different sorts is but limited. Guided entirely by trade lists, in which, unfortunately, the larger and more showy Pears and Apples are accorded the most praise, many are apt to fill their walls and gardens with inferior flavoured kinds, finding this out when too late. I

do not say it is necessary to plant many of these smaller kinds, as there are many of larger size of excellent flavour, but certainly where room can be spared, one or two trees of all the sorts named by "W. G. C." ought to be included. I cannot say much in favour of Citron des Carmes, as, although very early, it will hardly keep good twenty-four hours from trees on our soil. I find, however, a splendid substitute in Beurré Giffard, a Pear which "W. G. C." does not mention. This is very little behind Citron des Carmes in ripening, while it beats it out and out for keeping. It will crop well on Quince either as a wall tree or horizontal cordon. It has a somewhat musky flavour, which some might object to, but this is perceptible in many early Pears, notably Williams' Bon Chrétien. As a market Pear to be sold as soon as gathered, Beurré Giffard would, I think, answer well. I can endorse what "W. G. C." says in reference to Comte de Lamy. Very few Pears indeed possess a flavour superior to it. It likewise bears well in almost any form or position.—J. CRAWFORD.

**Mealy bug on Vines.**—Having read the remarks in your valuable paper respecting the above, it may be interesting to some of your readers to know the result of my experience in that respect. Having taken charge of the gardens at Bentley Priory, Stanmore, in 1896, I found a span-roofed range, principally vineries, in good condition, but with one exception—this being much infested with mealy bug—it was through no fault of the gardener who had charge of them before me, but the proprietor would have stove and greenhouse plants grown in them. I saw at once some severe measure must be taken. The houses were painted and the wire-work and walls well scalded, whilst 6 inches of the surface soil was taken away and made up with fresh; loose bark was also removed. I never was an advocate for scraping Vines, my impression having always been that it is injurious to them. I had boiling hot water poured over the Vines with a rose water-pot, and the Vines were syringed underneath in case any particle should escape the boiling water, the men having sufficient cloths to hold the syringe. They were afterwards dressed with a similar mixture as recommended on page 95. The second year about three bugs were found; the places were closely watched, but none appeared after in my time, and the vineries were much admired. I had experimented with the boiling water on scale before I commenced such an operation.—F. RUTLAND.

#### PLANTING AND MANAGING ORCHARDS.

THERE is still room for remarks on this subject, especially as spring planting is likely to be more general this season than usual. Personally, I am opposed to spring planting, preferring to carry it out in November while yet the ground retains some of the latent warmth of summer. New roots are then formed before actual winter sets in. This year, however, spring-planted trees are likely to do better, if in fairly sheltered situations and well cared for, than those planted in December, the roots of which have passed through an ordeal sufficiently severe to paralyse them, especially where the position is low and the soil retentive. In planting new orchards on pasture land there is often too much eagerness to get the trees in as soon as the ground is turned up; whereas if allowed to lie not only through the winter, but the following summer, being well hoed and scuffed at intervals to kill weeds and admit air and heat, the trees planted at the fall of the leaf will make more growth in one year than in three when planted in improperly prepared ground. With ground that is naturally fairly rich, ordinary trenching and at the same time working in plenty of good manure will suffice; but where the staple is either so shallow or so poor that holes have to be taken out and refilled with fresh compost,

more than ordinary provision ought to be made for the roots. When only one or two cartloads are placed in each hole it cannot reasonably be expected that fruit trees can thrive for long in such a limited larder. They never grow to half their normal size and the fruit produced is of the poorest. Six good cartloads to each tree is quite little enough, and when in a few years the roots traverse this the intervening spaces ought not to be allowed to remain Grass-covered, but be turned up a spit deep and annually dressed with good farmyard manure, that the strength may be washed down by repeated rains. We treat our Plums, Gooseberries and Currants in this way, and why not our orchards? Where Grass is allowed to grow it should be closely mown twice yearly and not grazed, as many fine young trees are completely ruined by cattle rubbing against the stems and eating the lower branches, especially when brought down by the weight of fruit. Indeed, for this reason some of our best cropping Apples, such as Lane's Prince Albert, cannot be planted where cattle have access on account of their weeping habit. I quite agree with Mr. Iggulden's statement some time ago that incalculable injury is done to fruit trees by the roots being exposed to harsh drying winds between lifting and replanting. I have frequently noticed trees offered for sale in country markets without a morsel of litter round the roots to protect them. Such trees are often purchased by farmers and others, and the roots subjected to further exposure, tied behind carriers' vans and other vehicles. Thus robbed of their vitality before being planted they linger on from year to year, a source of vexation to the owner. Another matter often overlooked in new orchards is shelter. This is of paramount importance, and where not afforded naturally may be supplied by planting single or, better still, double rows of well-furnished Larch on the exposed sides. These, though deciduous in winter, break into growth by the time the buds expand, and form a dense thicket before the blossom opens and the tender leaves unfold. Thinning out the shoots is also often carried to extremes, even in the case of old trees, in such uncertain springs as ours. Of late years I have noticed old, neglected orchards bearing crops of fruit, though small, while those receiving orthodox treatment in the way of liberal winter thinnings were minus fruit, owing to lack of shelter when the trees were in bloom. Last, but not least, comes the selection of varieties. Many err in this matter, even growers for market. As a rule, too many early and mid-season Apples are planted because they are known to be good croppers. Oldenburgs, Suffields, Grosvenors, and Ecklivilles are planted by the acre, with the result that the markets are glutted at a given time and prices rule low, as these sorts will not keep. What is really wanted is a good sized showy culinary Apple to precede the above sorts by several weeks, the same having a firm flesh and not liable to early decay. Of later sorts we have none too many. Lane's Prince Albert, Mère de Ménage, and Bramley's Seedling are all good, but I really think that some of our older varieties would still hold their own. The introduction of newer sorts has ousted them out of cultivation, at least so far as propagation is concerned, isolated old trees appearing here and there. For late use that most excellent variety Rymer was the sheet anchor of the old school, keeping sound and firm into May, and needing very little sugar when cooked. It was a heavy and certain cropper and resisted frost well. Hambleton (deux Ans, another old Apple, is well worth extended cultivation on account of its long-keeping properties and fine flavour. It

will grow to a good size on good soil. Sturmer Pippin is a most useful late Apple, being very acceptable in the dessert during April and May, and unsurpassed at that date for puddings and pies. It makes a fine symmetrical tree, sets a crop under adverse climatic influences, but requires good soil, so that the fruit may attain to its full size, otherwise it is liable to shrivel at the turn of the year. J. CRAWFORD.

#### SOCIETIES AND EXHIBITIONS.

##### NATIONAL CHRYSANTHEMUM SOCIETY. ANNUAL MEETING.

ON Monday evening last the annual meeting of the members of this society was held at Anderton's Hotel, Fleet Street, the chair being occupied by Mr. C. E. Shea.

After the secretary had read the notice convening the meeting, the minutes of the last general meeting and the minutes of the special general meeting in May last were read and confirmed. It was, as will be remembered, at the latter meeting at which Mr. Jukes was presented with an illuminated address on his retirement as vice-chairman and the discussion on Mr. Shea's paper on judging took place.

The annual report for 1894 was then presented, from which we learn that large additions to the roll of membership were made and that nineteen new societies were admitted in affiliation. The society's own shows fully maintained their reputation as the best in London, and the one held during November was considered to be the largest in the United Kingdom. The contest for the challenge shield brought forward five competing local societies, and resulted in a win for the Bromley Chrysanthemum Society. The meetings of the floral committee had been the means of bringing forward a large number of new varieties of great merit, and it is probable that during the months of October and November these meetings will in future be held at more frequent intervals. Reference was also made to the retirement of Mr. E. C. Jukes and to the presentation of an illuminated address recording the society's thanks for the valuable services that gentleman had rendered as an officer of the society. It was also pointed out that the work of the N.C.S. had embraced the issuing of a new supplementary catalogue and the Chrysanthemum Year-Book recently published. The president, Sir E. Saunders, still continues his warm interest in the society's welfare, and the report concluded with an expression of the greatest regret that the committee had learned the resolve of Mr. R. Ballantine to retire from the position of chairman of the general committee. Appointed vice-president in 1879, he became chairman on the retirement of the late Mr. E. Sanderson, a post he has filled with great credit to himself and advantage to the society. There is, however, reason to hope Mr. Ballantine's exertions in promoting the best interests of the society may be continued as a member of the general committee.

From the financial statement it appears that there were between six and seven hundred members in 1894 whose subscriptions amounted to £246 1s. 9d. Donations were received to the extent of £41 15s. 6d. Royal Aquarium Society contributed £294 16s. 6d.; affiliated societies' fees and receipts for medals supplied them was £143 —, and other sources of revenue bring up the total for the past year to £847 0s. 5d. The largest sum on the expenditure side is for prize money at the society's shows in September, October, November, and December, and, with the value of the medals awarded, amount to £426 3s. 1d.—the remaining items being of the usual kind, varying in amount. A balance of £29 10s. 2d. remains to the society's credit.

The chairman, in proposing the adoption of the report and balance-sheet, thought that in these days of depression the report and increased

financial balance were evidence of the prosperity of the society, especially as the past year was an ordinary working year of the society, and not an exceptional one like the centenary year. It was resolved that they be adopted and printed for circulation in the usual manner.

The election of officers was then proceeded with, with the following results: President, Sir Edwin Saunders; treasurer, Mr. J. R. Starling; chairman of committee, Mr. B. Wynne; vice-chairman of committee, Mr. T. W. Sanders; hon. secretary, Mr. Richard Dean; foreign corresponding secretary, Mr. C. Harman Payne.

One-third of the general committee retiring by rule, but being eligible for re-election, resulted in some fresh nominations being made, and there were five new members elected.

The business of alterations to the rules then occupied some attention, but the reader must refer to the new schedule, which is already in the printer's hands, for details. The following gentlemen were elected vice-presidents: Mr. Coles Child, president of the Bromley Chrysanthemum Society, and Mr. R. Ballantine.

The Woolwich Chrysanthemum Society was admitted in affiliation.

On the motion of the secretary, a vote of thanks to the chairman was passed for his able management of the meeting.

#### Scottish Pansy and Viola Association.

—This association has been formed in Glasgow to meet monthly during the summer to consider new varieties of Pansies and Violas, and to award certificates to them if deemed worthy. The following seven gentlemen have been appointed judges: Mr. J. Baxter, Daldowie; Mr. Wm. Cuthbertson, Rothesay; Mr. M. Gray, Glasgow; Mr. M. Campbell, Blantyre; Mr. J. Stewart, Lennoxton; Mr. W. Maxwell, Glasgow; Mr. H. Hamilton, Lochwinnoch. The judges are to give their verdicts by ballot. Varieties which receive three-fourths of the total number of points shall receive a first-class certificate, and those receiving one-half or more of the total number a certificate of merit. Another special feature will be the granting of special certificates for constancy to varieties which obtain a first-class certificate at three meetings. Such certificates and decisions it is hoped will prove valuable guides to the public and tend to set up a standard for new varieties. The membership of the new association is open to all on the payment of a nominal subscription of 1s., and provision is made for the reception of flowers by post, which shall be as carefully handled and adjudicated as if they were personally staged by the exhibitors. The following are the office-bearers, any of whom will be glad to send a copy of constitution and rules of the new association to interested parties: President, Mr. Wm. Cuthbertson, Springfield, Rothesay; vice-president, Mr. John Baxter, Daldowie; treasurer, Mr. Jas. Robertson, Turnerfield, Crow Road, Partick; secretary, Mr. John Smellie, Pansy Gardens, Busby.

**The weather in West Herts.**—The weather during the past week has been less cold than in any week since the third week in January, and at no time did the exposed thermometer show more than 13° of frost. The ground still continues very cold. At 2 feet deep the temperature is only half a degree above the lowest reading recorded during the frost, and at 1 foot deep has as yet risen only to the freezing point, which is 2° higher than when at its lowest. February was extremely cold. On two days (23rd and 24th) the highest day temperatures just touched the average maximum reading for the month, and on three nights the lowest night temperatures were also about average. Otherwise the weather remained cold throughout. Snow fell on three days and rain on one day, so that the total rainfall for the month comes out remarkably small—amounting only to two-tenths of an inch, or nearly 2 inches in defect of the February average. Dry as this month was, there has been another February still drier during

the last forty years, viz., February, 1891. For altogether 456 hours, or nineteen days, the direction of the wind was some point between north and east. The record of bright sunshine was rather above the average for February. The recent frost may be said to have lasted from January 21 to February 21, or for thirty-two days without a break. That is to say, on no night during that period did the thermometer in the screen fail to register a temperature below the freezing point. The double Snowdrop was first in flower in my garden on February 26, or seventeen days later than its average date of flowering in the previous eight years, and thirty-six days later than last year.—E. M., *Berkhamsted*.

### NOTES OF THE WEEK.

**Flowers from Ireland.**—We have received from Mr. T. Smith, Daisy Hill Nursery, Newry, a gathering of early spring flowers, amongst them *Iris reticulata*, *I. histrioides*, *Crocus Imperati*, *Galanthus nivalis pallidus*, the handsome *G. easaba*, and a bunch of the pretty *Cyclamen eoum*. The foliage of *Tellima grandiflora rubra* is very fine for colour. Sent with these are *Veronica selaginoides*, the green colouring quite pleasing, forms of *Erica*, *E. tetralix mollis* and *E. carnea*, *Andromeda Catesbii*, whose leafage is of a rich crimson tint, several shoots of *Andromeda*, and *Cassinia fulvida*—quite an interesting gathering of fine-leaved things and early flowers.

**Notes from Derbyshire.**—February 23. Snowdrops in the woods peeping through their snow blanket, and the bright yellow Aconite. Gathered a few of each just one month later than 1894. A late sown lot of Dobbie's White Turnip are very acceptable from the open ground; a dish cooked and served up whole proved excellent. Brussels Sprouts, greens, &c., are very good. Beds of Carnations, rather pressed down with the weight of snow, are freshening up, and look none the worse for their two months' covering. Daffodils, *Gladiolus The Bride*, and other early sorts, Tulips, &c., plunged in cold pits with cocoa-nut fibre, in spite of their being long frozen, are looking well.—GEORGE BOLAS, *North Derbyshire*.

**Azalea linearifolia.**—This curious species differs from all other Azaleas in almost every character but that of floral structure. It forms a flat-headed bush 3 feet to 4 feet high, each branch being terminated by a tuft of narrow light green leaves, which are densely covered with hairs. The specific name is very appropriate, as the leaves, which vary from 1½ inches to 3 inches in length, are not more than one-eighth of an inch wide at the broadest part, and taper to a point. The flower is composed of five narrow petals, similar in shape to the leaves, each one being 1½ inches long and of a light rosy purple. This Azalea, which is a native of Japan, will grow out of doors if planted in sandy peat and given a moist and sheltered position. In the cool greenhouse it grows well, and during February and March produces its flowers in abundance. Except for those, however, who like to have curious as well as beautiful plants in their greenhouses, it is scarcely showy enough to gain an entry there, but outside it makes an interesting and pretty bush, and is certainly worth cultivation.

**Tremandra Hugeli.**—This is a dwarf, bushy plant, usually not more than 1 foot in height, with numerous narrow and pointed leaves not more than half an inch long, and covered with short hairs. The flowers are produced from the axils of the leaves near the point of each shoot. They are nodding, upwards of 1 inch across if fully spread out, and of a pale, but bright purple colour. The petals are four in number, obovate, and, on account of their opening to only about half the full extent, render the flower somewhat campanulate. At present this plant does not appear to be very well known, although considerable quantities have during the last few years been grown in one at least of the large London

nurseries. It is just now coming into bloom, and its bright flowers and neat compact habit make it one of the prettiest of small greenhouse plants. Unlike the majority of its fellows in the *Tremandra* family, it is very easily grown and propagated. Its requirements are the same as for soft-wooded Heaths, to many of which it bears a close resemblance in habit and foliage.

**Spring flowers.**—We have now had three mild days, and the ground is thawed to the depth of about 2 inches, but in the face of the frozen conditions below, where nearly all bulbs and roots must be ice-bound, the progress made by many things is quite marvellous. I had a quiet walk round to-day (Feb. 23) and found the following: Winter Aconites everywhere, both in shade and sunshine, in full flower, many kinds of Snowdrop, *Colchicum fasciculatum* with numerous small rosy flowers—in fact quite a rosy patch. This does not appear to have suffered in the least either in leaf or bud; it is a pretty little species. *Cyclamen eoum*: about a dozen square yards of this in a sunny aspect has really thousands of flowers—in fact there is quite a red glow, very good indeed; while the same plant in shade has not an open flower. *C. alpinum*, a charming thing, has also a few open flowers. This is near to *eoum*, but the leaves are only about one-third the size. *Polygala Chamæbuxus* and *P. C. purpurea*, whose buds simply held in reserve during the cold, are already glowing with yellow or purple, as the case may be. *Crocus gargaricus* has dozens of pretty little intense orange-coloured flowers, and a few are nearly red in their intensity. These, I think, were injured by the cold in the bud state with this result. *C. vitellinus* has also dozens of open flowers, but of a much paler yellow. *C. Sieberi*, *hyemalis*, *Imperati*, and *Fleischeri* have also plenty of buds and some open flowers. *Muscari azurea robusta* is already blue. *Narcissus cyclamineus* is just showing the yellow, and will be our first Daffodil. I believe all the early scapes of *N. pallidus precox* are killed. *Pulmonaria saccharata* is showing its ruby buds. *Sisyrinchium grandiflorum*, about which we annually write, is prostrate (it was very forward, with many flowers open before the frost set in), having been killed at the snow line. An instance of excessive hardness is found in *Fritillaria liliacea*, whose young growths are from 2 inches to 3 inches high and quite unharmed. In a garden fairly stocked with hardy plants there is really no part of the year without interest, and the above is no mean record at this date.—T. SMITH, *Newry*.

**Opening of Lincoln's Inn Fields.**—These gardens were recently opened by Sir John Hutton, chairman of the London County Council, for the public.

**Cattleya Lemoniana.**—Can you give me any information as to what Feat. &c., is required for *Cattleya Lemoniana*, as I have a plant labelled by this name, and it never flowers, although it grows freely? Any information would greatly oblige.—J. J., *Newport*.

**Supporting Hyacinth spikes.**—Would "J. C.," who recommends wire for this purpose, kindly explain what kind and size he advises? If he has not wire game at hand, perhaps he could give the diameter in centimetres, or in thirty-seconds of an inch. Probably galvanised wire need be only half the diameter of copper wire to secure the same stiffness.—W. T. B.

**Names of plants.**—*H. Greenwood*.—*Dendrobium nobile*, a very highly coloured form, but not *nobilis*, which has much darker and larger flowers.—*Mrs. Stephen Marshall*.—*Amaryllis sulcata*.—*T. G. Binney*.—Not *Dendrobium nobile nobiliss*, but a very good form. It is not particularly valuable, because of late years we have received such splendid varieties of this *Dendrobium*.

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"This is an Art  
Which does mend Nature; change it rather; but  
THE ART ITSELF IS NATURE."—Shakespeare.

## ROSE GARDEN.

### ROSES UNDER GLASS.

MORE than once have I been asked whether Roses under glass are better in or out of pots, and, from a look round among my own recently, the thought occurred that a few words upon this matter might be of some service to inexperienced growers. Whether they are better in pots or not must depend to a great extent upon two things—what they are wanted for and the space at disposal. The variety to be grown also has some considerable bearing upon the matter. We cannot cover a roof with *Maréchal Niel* or any other strong climber from an ordinary pot plant. So great a quantity of growth naturally requires a corresponding amount of suitable soil. A box or half of a tub may serve our purpose, but a pot will not. Such kinds as *The Bride*, *Niphetos*, *Sunset* and *Comtesse de Nadaillac* seem best in pots, as we can then remove them as they go out of flower; nor do these and similar varieties make sufficient wood as a general rule to pay for turning out. Putting the selection of varieties on one side, there is the question of more uniform moisture and unconfined root-run. A border of *Teas* in a house 10 feet high was planted in 1885, and is still a success. For steady forcing these do very well, but on the walls of the same house *Roses* are apt to feel the effects of cold soil from the outside, and it is very certain that many of their roots have rambled beyond the inside soil during those years. Our soil must be entirely inside and the roots kept to this if we are to force *Roses* that are turned out during such cold weather as we generally have through January and February. It is obviously unreasonable to force specimens of climbing or other *Roses* while many of the roots are in cold soil, and for this reason I would advise that all hard forced plants be grown in pots, so that the soil may also be warm. Let them be partially plunged if on a dry bench, and they are better so when growing on a side border. We do not find the soil outside in summer so hot as the atmosphere, and if we allow our soil to get too warm and dry, there is danger in that direction as well as in the other extreme. When turned out into a larger mass of soil the roots can secure more uniform moisture, and are seldom checked and crippled by sudden drought. Under good management this should not occur with pot plants, but still it does occasionally happen that a few get neglected and lay the seeds of many ills among the whole batch. Mildew, for example, can often be traced to this cause as well as draughts and unreasonable ventilation. Insects of all kinds seem to thrive more upon plants that have received a check. Doubtless much of the latter is fancy, seeing that our plants would naturally be making less progress even if not affected by insect pests; but in the case of mildew, I take it to be an established fact that this disease spreads more rapidly when a plant is out of health. The unhealthy growth and mildew accompany one another, although we frequently see a wonderfully thriving batch of plants suddenly attacked in a most alarming manner and quickly ruined; but the primary cause was a chill or check of some kind.

I would rather have to look after *Roses* turned out into a border of soil that was all under cover than a batch of pot plants, and it seems to me to be more in keeping with Nature that the soil should receive warmth from the surface rather than from all quarters, as is the case when a pot plant is stood on a bench. *Roses* in the former state are longer lived, break more evenly and strongly, and grow away more naturally. But, as I have already pointed out, much depends upon the variety and section of *Rose* cultivated. The *Fairy* or *Lawrenceana* section, for example, are far more serviceable when grown in pots, while the strongest growers of *Teas* and *Noisettes* can scarcely derive sufficient and continuous support when limited to a pot to do themselves justice either in growth or bloom.

RIDGEWOOD.

### DARK ROSES IN POTS.

SWEET and charmingly delicate as are our *Tea* and *Noisette* *Roses* when grown under glass for winter and early spring blooming, we cannot get the dark and glowing crimson with maroon shadings found only among the *Hybrid Perpetuals*. A good red *Rose* in winter has a wonderful charm either by itself or when brought into contrast with the more delicate shaded *Teas*. Their perfume, too, is so distinct from others, that both for this and colour they should be grown more often. Granted that the *Teas* are more free-blooming and a little easier to manage, with more care in starting our *Hybrid Perpetuals* steadily we may have them in good form. Selection of varieties has considerable bearing on this, and such as *Horace Vernet*, with other bad growers, although occasionally producing a truly magnificent bloom, are quite useless for winter work under glass. Having proved this, I will name half a dozen dark *Hybrid Perpetuals* that are most suited for our purpose, and then proceed to give a brief outline of their culture.

*GENERAL JACQUEMINOT* is a deep red with dark shadings, particularly free both in bloom and growth, also exquisitely scented.

*FISHER HOLMES* is a sturdy and uniform grower with dark scarlet and maroon shaded flowers. Like the above, every bud or bloom is useful and good.

*A. K. WILLIAMS* does well under glass, and affords an intense carmine-red with magenta shadings.

*GUSTAVE PICANEAU* is a bright shaded carmine, very large—in fact, one of the largest—a moderate grower and thoroughly continuous in blooming.

*PRINCE CAMILLE DE ROMAN* will give us a deep maroon and velvety crimson, almost black at times; while if we want a red climber we must go to *Reine Marie Henriette*.

Now for a word upon their culture. Let them be established in pots previous to housing. The best plan is to pot up one season and force the next, putting them well plunged in a pit during the first summer. Any good rich soil will do. I like to use a fair sized pot, say one of 8 inches, and leave 2 inches or more of surface space. This guards against drought at the roots while outside during the first summer, as more water is accommodated at a time. It also leaves us room for an efficient mulching before forcing the following season, and we are able to cover the base of our plant more effectively. The value of this will be seen as the season advances, for it is essential that the eyes around the base should be encouraged to break strongly, and not only supply late flowers, but produce valuable wood for the third season.

Now about pruning. Do not study this too much, but cut out spray-like wood first, and then

fix any very healthy and stout shoot in as horizontal a manner as you can. Much depends, too, upon the size of your plant and pot. As the young growth advances the shoots can easily be tied out to short sticks, somewhat in the same way as fancy and show *Pelargoniums*. It is fatal to hurry a *H. Perpetual Rose*, especially at the first. When the buds can be discerned in the new growth we may afford more heat, and now is the best time also for weak liquid manures. Any kind will do; indeed, it is advantageous to change, but be sure it is weak and freely supplied in preference to stronger and rarer doses. The ordinary culture for *Roses* under glass, and which has been so often given in these pages, will suit very well beyond this. It is a question of varieties and steady treatment. R.

## KITCHEN GARDEN.

### DIFFICULTIES WITH ONIONS.

LATTERLY I have spent much time among amateur gardeners, this including cottagers, and have made it part of my business to find out what they most often fail with. That there are plenty failures, partial or otherwise, need hardly be stated, but as yet it is *Onions* that seem to baffle my friends the most, and I get more inquiries about these than upon any other class of vegetables. To the ravages of the *Onion maggot* must be attributed most failures, but mildew also has to be reckoned with in some districts, while I also found out that some of the least experienced growers were under the impression that *Onions* could be grown on poor ground without manure. So they can if only wanted for pickling. In all probability, however, if the ground was well prepared for *Onions* and more liberal treatment accorded generally, there would be far fewer complaints of failure from any cause. If grown quickly and strongly the *Onion maggot* would have less time to work destruction, as they are almost powerless against strong or nearly fully grown plants, and the mildew is also most destructive among backward plants. Chemical manures and soot, in addition to stimulating a rapid growth of plant, are also obnoxious to insects generally, and a free use of soot alone has been the means of saving many crops. Cottagers, in particular, fail to realise what a valuable manure, insecticide, and disinfectant they have in soot. If they do employ a chimney-sweep they allow the latter to carry away the soot, while in very many cases the chimneys are never swept, but, in defiance of all laws, are burnt out as often as need be. Soot can usually be brought at the rate of 8d. per bushel, and one peck of it is enough to dress a square rod of ground. This should be forked lightly into the surface prior to sowing the seed, and those who mean having a full crop of fine *Onions* would only regard the soot as supplementary, good solid manure being previously dug in at the rate of three barrow-loads to the square rod. When I had to contend with the *Onion maggot*, common salt was used at the same time as the soot at the rate of 4 lb. to the square rod, while road grit was also liberally distributed over the ground and then lightly forked in. Salt, however, is not suitable for clayey soils, as it first causes them to run badly when it is wet, and then crack seriously in dry weather, road grit being also of most service in solidifying lighter soils. As it happens, it is the lighter soils that are most infested by the *Onion fly* and its progeny, those that set well, that is to say run together rather on the surface, offering fewer facilities for the movements of the fly and maggots. In bad cases a second dressing of soot at half the previous rate should be given when the rows of plants are well defined, and this be lightly stirred in with a Dutch hoe. For light soils, half as much as previously used of salt may be added to the soot, or, better still, nitrate of soda be used instead at the rate of 1 lb. per square yard, sowing along the lines of plants

and between them rather than recklessly broadcast. For heavier soils, sulphate of ammonia in a well pulverised state may be substituted for the nitrate. It will be seen that I do not favour broadcast sowing, distributing the seed very thinly along shallow drills drawn from 10 inches to 12 inches apart being the most economical and the best in every way. Having to thin heavily is always unfortunate, as it is very prejudicial to those that are left and also seems to favour the increase of Onion maggots. Always thin early, or as soon as the plants can be drawn, but if they are not more than 3 inches apart, leave the lot, and if a little thicker than that, it will not much matter unless extra fine roots are desired. It is the bunches of plants that I object to.

Growers of exhibition Onions are not nearly so much troubled by the Onion maggot as are those who take less pains with their crops. In their case success is due not merely to the extra preparation of the ground in the shape of free manuring and deep digging, but they also adopt the practice of raising all the plants they require under glass, sowing the seeds in heat early in February. Several hundred plants can be raised in a single box, and these, when about 4 inches high and after being duly hardened off, should be planted out from 4 inches to 6 inches apart in lines 12 inches apart. They would be well ahead of any obtained by sowing in the open ground late in February or early in March, and more than maintain their lead. These early-raised, transplanted Onions not only attain a great size, but they are usually of perfect form, mature early, and keep well accordingly. The most successful cultivators grow the new large varieties to an enormous size, so much so, that they are sometimes mistaken for imported Onions. Ailsa Craig when weighing from 3 lbs. to 5 lbs., as they frequently do, most resemble Portuguese Onions, being of much the same shape as those imported. Sandy Prize and Anglo-White Spanish also grow to a great size, but are of more perfect form. When seeds of these rather expensive varieties are sown in heat, all or nearly all germinate, and every plant is saved. Sown in the open, there are almost certain to be some losses, and that is another point in favour of sowing in boxes and transplanting. The Onion maggot is bad enough to contend with, but in some gardens mildew is even more to be feared. A change of site and good culture are to a certain extent preventives of the former, but with mildew a change of site is apparently of no avail, and once it starts it is liable to over-run a large bed in a few hours, the wind assisting to spread the disease. Some growers are of opinion that it is analogous to one of the diseases that sometimes over-run Potatoes, and that it is unwise to locate the Onion bed near to Potatoes. Authorities are quite of opinion there is no remedy for mildew in Onions once it is firmly established, and all measures taken should, therefore, be of a preventive nature. A very successful grower of my acquaintance who is practising gardening in a district where the disease works sad havoc among the Onions is not troubled with it in the least, and attributes his immunity to the rough-and-ready method he has of drenching the rows with soap suds, sewage water, liquid manure or anything else he can get of a somewhat similar nature, very frequently during the early part of the summer. This causes the Onions to grow so robust as to practically render them mildew-proof. Others find a mixture of newly-slaked lime, soot, and flowers of sulphur efficacious, only it has to be applied daily in wet weather, owing to its failing to stick. Spraying with Bordeaux mixture, a remedy for Potato disease, is also worthy of a trial on Onion beds, only unfortunately this is not well within the reach of cottagers and most amateurs. As an horticultural instructor, it will be part of my duty to try this remedy, and as I propose using it in various centres, something definite as well as instructive should be arrived at. A ROVER.

**Notes on Lettuce.**—"W. G. C.'s" selection of Lettices (p. 80) is a reliable and comprhen-

sive one, but I venture to add two Cabbage varieties, viz., Golden Queen and New York, the former for forcing and early use excelling Paris Green, and the latter superior to any kind I have grown for summer, but, nevertheless, a variety that seems little known. I am aware these are strong assertions, but I hope "W. G. C." will give both a trial; if he does, I feel certain he will confirm my opinion.—J. R.

**Two good Celeries.**—Celery Leicester Red undoubtedly deserves the word of praise "J. C." (p. 80) accords it, for it possesses all the good qualities ascribed to it, and should be largely grown for main crop. Carter's Incomparable Crimson is excellent in every way for the latest crop, unsurpassed for crispness and nutty flavour, and the latest in "running" of any variety I am acquainted with. If it has a fault at all it is its extreme brittleness, requiring the utmost care in handling to prevent the sticks from being broken. I unhesitatingly recommend it as a sterling late variety.—J. R., *Merioneth*.

**Early Carrots.**—A good deal has been written of late respecting Carrots and the earliness of certain varieties. I have previously written in praise of the new variety Market Favourite, and would urge all those who grow them in frames or on early borders to give it a trial. I used to think the old Nantes Horn would never be beaten for speed, but grown under exactly the same conditions either in frames or in the open, Market Favourite is ready for drawing a fortnight earlier. It is certainly not so deep in colour, but where earliness is a consideration this is not of such importance. It is of good length and thickness, very symmetrical, and without much core. Having rather a large top, it requires plenty of room.—J. CRAWFORD.

**Sowing Early Parsnips.**—Many growers of Parsnips will be anxious about the state of the soil, as we are told that the sooner the seed is in the ground the better, but I fail to see why such should be the case. I do not grow for show, as we do not want roots a yard long, in fact have no means of cooking them. Medium-sized roots are of better flavour than large ones, as when seed is sown early in April, that is along with the main crop of Carrots, roots 18 inches long with a good thickness can be secured by autumn. As regards variety, I think the Student superior to the Hollow Crowned. It is of good flavour, and being a medium-sized root is certainly the best variety for private gardens. For keeping till late in the spring I often sow a little seed in the end of April or early in May, and do not lift, but leave in the soil. The roots are valuable, and, being tender, much liked in the kitchen.—S. M.

**Late Purple Sprouting Broccoli.**—The plants sown the first week in May have passed through the very severe weather we have experienced without injury, whereas the earlier kinds sown in March are killed to the ground. I am aware the late kind is not so nice looking as the white, though this latter is advised in seed catalogues to be sown for use in April; but in such seasons as we have experienced I fear there are few white kinds left, unless much sheltered. Even the Early Purple form is much injured. The Late Purple is a tall, large grower when sown too early or crowded in its earlier stages, and, as is well known, such plants suffer most; hence the necessity of growing compact plants and as firm as possible. This kind is certainly much hardier than any other and of good quality when cooked. It is one of the first vegetables to start into growth after severe frost, giving a lot of material for weeks when green vegetables are valuable. To get a long succession plant in different positions. If a north border can be spared the supply is much later, and in all cases I have found that the Kales give the best results when grown as hardy as possible. S. H. B.

**Tuberous Artichokes.**—Accepting the tuberous-rooted Stachys as an Artichoke, we have made during the past few years at least a couple of notable additions to this hardy, but by no means popular section of edible roots. The first,

though latest, is the white Artichoke of the Helianthus family, the other being the Stachys or Chinese Artichoke. Everyone now admits that the White Jerusalem variety is much superior to the old brown-tubered form in shape and in flavour, as well as quality of flesh. Some gardeners even go so far as to say that there is in respect of flesh quality no comparison between the two, but we all know what great differences are found in diverse methods of cooking. Still, without being more prolific, the white form is undoubtedly a considerable improvement. Jerusalem Artichokes should be, like Parsnips, cooked in very little water, so as to have the flesh melted rather than boiled; also they should be served, whether whole or mashed, as dry as well can be. The Stachys tuberifera evidently owes much of its popularity, or lack of it, to cooking. That the tubers are easily grown is evident, and the plea that once in the ground it is hard to destroy seems out of place, as where trouble is given the year following the growth of a crop, a free use of the hoe on the top would soon destroy them. The roots are best left in the ground all the winter, but a portion of a bed should be covered up with litter, so as to enable access to be obtained. When lifted, the roots should be thrown into water to exclude air and preserve whiteness, then gently boiled, and later drained dry, then fried in butter, some being partly browned, and then served with sauce or gravy. So treated, they constitute a most delicious dish, one that thousands would like to have often during the winter months.—A. D.

**Winnigstadt Cabbage.**—Although I have grown this excellent Cabbage extensively for many years, I have happily not found the difficulty "G. W." mentions (page 40) of getting the true stock. It is a splendid autumn and winter variety for supplying the demand during those seasons. The quality is exceptional, and it does remarkably well on light soils.—J. R.

**Lee's Cabbage Lettuce.**—For the winter and coming in early for use in the spring this Cabbage Lettuce can be highly recommended. During April and May excellent heads of much crispness are obtained from autumn sowings upon warm south borders.—J. R.

**Early Potatoes.**—Without doubt it repays any gardener well to incur the trouble and expense incidental to erecting a light temporary framework or trellis over a warm border after having planted the ground somewhat closely with dwarf early Potatoes. If the sets have been first sprouted in gentle warmth and in full light, then disbudded to one, or at the most two sprouts, they are in the best possible condition for planting. The border should have worked in during the planting some half-heated short manure and leaves, as through that agency growth is stimulated. If such plantings be made about the middle of February, tops are well through the ground in three weeks, and over the trellis or framework erected there should be drawn at night a stout canvas cover, or have mats thrown over to preserve warmth in the soil, and later to protect the tender tops from frost. If the sets have been planted 6 inches in depth and in rows 15 inches apart, earthing will be impossible, and indeed not required. In such a way it will be easy to have fine young Potatoes several weeks before they can be dug from unprotected borders. A few sorts specially suitable for this form of culture are Ringleader, Laxton's Early, Sutton's A1, Veitch's Ashleaf, Sharpe's Victor, Midsummer Kidney, all good, having shortish tops and precocious croppers. We have not given so much attention to the first early section of Potatoes as to later ones, but there can be no doubt that the production of any variety that shows in the direction of short tops and exceptionally early tuber special excellence is indeed a great gain. The growth of some of these sorts in pots in early vineries, Peach houses, or in frames always repays, though in that case the tuber production is relatively much below that of open-air plantings.—A. D.

**CHRYSANTHEMUMS.**

**ANEMONE-FLOWERED CHRYSANTHEMUMS.**

IN THE GARDEN for November 24 last I took the opportunity (p. 440) of drawing attention to some of the most attractive forms of this section which had then just recently been staged at the National Chrysanthemum Society's exhibition at the Aquarium. Anemone Chrysanthemums have been so long and so steadily

that the disc be high, certainly not less in form than half a globe; at the most but a trifle more than that."

Of the varieties that were generally in cultivation fifteen years ago when I first took up the cultivation of the flower, Acquisition, Bijou, Fleur de Marie, Glück, Georges Sand, King of Anemones, Louis Bonamy, Lady Margaret, Mme. Goderau, Mrs. Pethers, and Prince of Anemones were, perhaps, some of the most popular, and belong to a distinct type. In later years these old sorts seem to have been employed by the seedling raisers of France and

the latest of the new type. Looked at as a Japanese or hybrid Anemone, as they were first called, it is probably one of the best, and likely as an exhibition or a decorative flower to be of some value. It is a seedling of English origin, having been raised by Mr. H. J. Jones, of Lewisham, in 1893 and distributed by him in the spring of last year. It was flowered in the Rye-croft Nursery last autumn with considerable success, and was a rather bold, striking-looking variety of its kind, although, to my taste, less charming than the new French seedling Junon, on view there at the same time. On November 21 the flower bearing the distinguished novelist's name was submitted to the floral committee, and from my notes of that meeting the following description is extracted: Very long guard florets of medium width, good centre, tubes rather loose, deeply toothed and open at tips, colour pinkish white, centre deep rose, shaded yellow, very large blooms.

Some of the newer forms of the Japanese Anemone section will no doubt find admirers among the flower-loving community of the present generation, but the old school florists are firmly wedded to their idea of "properties," and to these the Japanese Anemone does not conform.

Probably the first of the group was Duchess of Edinburgh, introduced by Messrs. Veitch and Sons in 1875, and this remained for some years the only variety of the kind. Some few years later Fabian de Mediana, Mme. Berthe Pigny, Mme. Clos, Mme. Thérèse Clos, Mlle. Cabrol, Marguerite Villageoise, Sœur Dorothee Souillé, Souvenir de Lardenne and Timbale d'Argent followed, and were pretty generally grown and shown, but these are now giving way to other introductions of the same kind. The great fault of the Japanese Anemone Chrysanthemum is its tendency to run to lilac or mauve shades of colour. Good crimson and yellows would undoubtedly be a distinct gain, and in the latter the best example at present is John Bunyan. C. HARMAN-PAYNE.



*New Japanese Anemone Chrysanthemum, Rider Haggard. From a photograph sent by Mr. H. J. Jones, Rye-croft Nursery, Lewisham.*

**CHRYSANTHEMUM W. H. LINCOLN.**

I AM at a loss to understand how Mr. J. C. Tallack (p. 128) arrives at the conclusion that my note on the above Chrysanthemum (p. 104) bears out his contention (p. 58) that, when growing this variety for the production of cut blooms, disbudding is an absolute necessity. In the instance cited by me I was careful to point out that, although no disbudding had been practised, the individual flowers were of good size, as, owing to the fact of the sap having been monopolised by the centre bloom on each shoot, some of the side buds had developed. Your correspondent says "I prefer to do my own disbudding, and do not leave it in this way to outraged Nature." How Dame Nature can be "outraged" by being left in every way to her own devices it would, I imagine, be difficult even for Mr. Tallack himself to explain. "To outrage" is of necessity a verb of action. That there was an absence of action in the case referred to by me that might possibly have merited the appellation of neglected I admit, but I did not observe that unassisted Nature (if I may be allowed to substitute the term "unassisted" for "outraged") had acted as though aggrieved by the omission of that beneficent mutilation advocated by Mr. Tallack. In fact, I considered, and still consider, that the results obtained were eminently satisfactory. I am not finding fault with the system of taking cuttings and potting them on. That is doubtless the most sure course to pursue, but at the same time it must be remembered that it is a course which entails a considerable amount of labour in potting, stopping, disbudding, and watering; whereas that of planting out the old stool and potting it up in October reduces the labour to a minimum, and in growing for market

cultivated by a rather small body of growers, and are so interesting as a group, that I have long been surprised to find that the rate of progress they have made is out of all proportion to their merits. When I say this I ought, perhaps, to explain that by the word "progress" I mean improvement in colour and in size only, for in form it is doubtful if any real improvement can be made considering the type of many of the old exhibition sorts. In the article above referred to will be found what may be taken as a generally accepted definition of an Anemone Chrysanthemum, although through an error of punctuation there is some little ambiguity in the second paragraph, the third sentence of which should read as follows: "It is essential

America for the purpose of crossing with the Japanese Chrysanthemum, with the result that many of the modern sorts have lost the neatness of form that distinguished their predecessors. We have now many Anemone Chrysanthemums of large size with long, ragged, drooping guard florets and discs composed of loose, open, tubular florets, that may be valuable so far as size is concerned, but which are not to be compared in other respects with the old Chinese type. Some of these novelties have really no pretence to the semi-spherical disc at all, and wanting this, upon which the beauty of an Anemone so much depends, they want all.

The variety Rider Haggard, which is reproduced here in a much reduced form, is one of

the labour bill has to be taken into consideration. The rough and ready way, in one case at all events, has answered well. Whether it can be depended upon to produce equally good results when carried out on a large scale I cannot say, but I hope this year to give both methods a fair trial, in order to be in a position to form a better opinion as to their respective values. When I wrote that a nurseryman had offered 4s. for the plant, I should have mentioned that this offer was for the flowers alone, and did not include the pot. Mr. Tallaek ridicules the idea that this price, or even double, viz., 8s., for the forty-eight blooms (averaging 3½ inches in diameter) would be remunerative. I can only say that thousands of such blooms were, to my knowledge, sold at less than 1s. a dozen last Christmas, and I should hold the wholesale grower who received over 2s. per dozen particularly fortunate, as this price would mean at least 3d. per bloom retail. Naturally, the profit depends largely upon the amount of labour expended on the plants during their period of growth, and where the sum total of this is represented by potting up and housing two months before the blooms are cut, 4s. per plant should leave a fair margin; and should 8s. be obtained, the grower, while failing to excite Mr. J. C. Tallaek's envy, would assuredly receive the congratulations of S. W. F.

— This serves two useful purposes. Cultivated on the orthodox plan of carrying three blooms upon each plant with one main stem, it is one of the best of early exhibition varieties. Managed upon the topping system, it is one of the best if not the very best varieties with yellow flowers for late work. When I say late I do not mean after Christmas, but as a December-flowering variety it is especially valuable. One market grower of my acquaintance grew several thousands of it last year, and intends to treble the number for the next flowering season—in fact has decided to grow no other yellow *Chrysanthemum* in quantity.—E. M.

## TREES AND SHRUBS.

### RARE TREES AT ESHER PLACE.

THIS beautiful and historic park, the residence of Sir Edgar Vincent, K.C.B., is within easy access of the metropolis, and the grounds contain not only unusually fine old specimens of our forest trees, but also a representative collection of some of the rarer conifers. The Oaks and Beeches are thriving unusually well in the light sandy soil of which the park is for the greater part composed, and not a few of these contain a large quantity of excellent timber, and rise with clean and well-rounded boles to from 70 feet to 90 feet in height. Hard by the famous Wolsey Tower may be seen many excellent examples of the English Elm, and which in the dampish alluvial deposit seem to find all that is necessary for their perfect development. Many of these reach to 90 feet, with clean columnar stems that girth in some instances fully 12 feet at a yard from the ground.

The pride of Esher is, however, its fine old Tulip tree (*Liriodendron tulipifera*), a specimen without a rival in this country, whether as regards size of stem or spread of its ponderous branches. At 3 feet from ground level the fluted stem girths 18 feet 7 inches, while the branches cover a spread of 78 feet in diameter. It is in the rudest health, as is amply demonstrated by the great wealth of the brightest and freshest of foliage and the entire absence of dead or dying limbs. When in full flower this tree is an object of unusual interest and beauty, the blooms being produced in almost extravagant abundance, while at present the curiously-formed, cucumber-like fruit renders the tree conspicuous in a marked degree. The long and lithe branches sweep the greensward in an easy and graceful manner and add quite a charm to the neatly-kept lawn. On account of the far-spreading limbs, many of which are when in full leafage fully a couple of tons in weight, every care has been bestowed so as to minimise the chance of any

of these splitting away from the main trunk, and iron rods have just now been added to the props previously in use, thus rendering the immense head perfectly safe for many a year to come.

At no great distance from the Tulip tree may be seen an unusually fine old specimen of *Magnolia grandiflora*, and which for some time back has been an object of general admiration on account of the large numbers of perfectly developed flowers with which the tree has been studded. Usually we find this particular species of *Magnolia* occupying some cosy corner by the wall side, it not being considered sufficiently hardy to use as a standard unless, indeed, in the milder portions of Southern England. The Esher specimen, however, stands quite alone, and looks healthy and happy in its isolated position. Many of the flowers are 8 inches in diameter, almost pure white and deliciously fragrant, though much too powerful for placing in a living room. It is by no means common to find the Indian Cedar (*Cedrus Deodara*) in cone, yet a well-furnished specimen in the park is at present bearing large numbers of full-sized and perfectly developed fruit.

The pinetum is also well worthy of a visit, for there may be seen such rare trees as *Cunninghamia lanceolata*, the dwarf *Weymouth Pine* (*Pinus Strobus nana*), the weeping *Indian Juniper* (*Juniperus recurva*), the curious dwarf *Mountain Pine* (*P. Moghus*), the *Canadian Hemlock Spruce* (*Tsuga canadensis*), as well as numerous species of the less common *Junipers*. Such large growing trees as the *Douglas Fir* (*Pseudotsuga Douglasii*), the *Mammoth Tree* (*Wellingtonia gigantea*), *Sequoia sempervirens*, *Thuja gigantea*, *Picea Menziesii*, and the *Austrian and Corsican Pines* (*P. austriaca* and *P. Laricio*) are represented by finely developed specimens, the two latter being of unusual height and girth of stem. The curious and rare *P. longifolia* is likewise well represented.

Amongst shrubs, the *Strawberry Tree* (*Arbutus unedo*) flowers and produces fruit freely, and seems quite at home in the light sandy soil in which it has been planted. The *Myrtle* may also be seen growing freely enough against the garden wall, and where, judging from its size, it must have been for very many years. *Laurustinus* flowers freely, and attains to such a size as we rarely see except in the ozone-laden atmosphere by the seaside. Peat-loving plants also grow fairly well, and not a few good examples of the commonly cultivated *Azaleas* and *Rhododendrons* are to be found. The old *Mulberry tree* in the kitchen garden is worthy of note, it being a robust, healthy specimen, with as fine a head of dark green foliage, just now relieved by the showy fruit, as could be wished for.

Altogether the trees and shrubs at Esher Place are of unusual interest, and the collection will shortly be augmented by other worthy representatives of the family. A. D. WEBSTER.

**Magnolia macrophylla.**—The interesting and exhaustive article on the *Magnolia* family that appeared a short time back in *THE GARDEN* would seem to render any reference to individual members of that family somewhat superfluous. Yet I should like to call attention to the particular kind named at the head of this note, because, although its unique foliage renders it specially valuable for ornamental planting, it seems to be a comparatively unknown tree. Although requiring a sheltered spot it is perfectly hardy, the specimen here being rather over 30 feet high. In the distance the foliage looks almost like small leaves of the *Musa*, individual leaves averaging 15 inches in length by 6 inches in breadth, and there is a glaucous under-surface, reminding one somewhat of the *Eucalyptus* family. The flower is remarkable for its size, being from 8 inches to 10 inches in diameter, but otherwise has nothing to recommend it. The petals are very flimsy and dirty white in colour. It is a deciduous tree, late in putting on its foliage, and given a mild autumn, a proportionately late leaf-shedder, more so than its smaller foliated allies, as, for instance, *acu-*

*minata* and *glauca*. I should like to recommend it to the notice of planters as an ornamental tree for small lawns. Planted, for instance, at the head of an open glade, where it is backed by trees of larger growth, it is a wonderfully distinct and striking feature. In common with other beautiful foliated trees, it is certain that it might be used with advantage where unique summer foliage is required in lieu of costly and tender subtropicals. The paragraph noting its hardness, and, at the same time, the necessity for a sheltered spot, may read contradictory, but it has reference to shelter from wind in exposed situations. Heavy gales are apt to split and tear the foliage and to spoil the general appearance of the tree.—E. BURELL, *Claremont*.

### FAIR WEATHER EVERGREENS.

A FRIEND writes from Ireland: "Six inches of snow here now and 10' to 15' of frost nightly. Half-hardy things will go off by the hundred, but it is a blessing to get a garden purged, as it were, every ten or fifteen years at least." We do not look upon this kind of prospect with at all the same complacency as our friend, because of the ugliness which must result from deaths in severe winters, owing to our very common practice of planting so many evergreens. If they were really hardy evergreens it would matter less, but more than half of them are not hardy in very hard winters, except it may be in sheltered valleys and light soils of the English sea coast. There is so much sea coast, however, as to allow a large margin for escape, but even our commonest evergreens are killed in the central parts of the country both in Ireland and England, not excepting the common *Laurel*. This, however, we could well spare, because in many places we have ten times too much of it. No doubt some of the evergreens that we try to have, and occasionally suffer so much for, are worth a chance, such as the *Bay* (which is the true *Laurel*) and the *Laurustinus*, though we have seen these killed on the shore, even in warm *Sussex*. The lesson to be learned from such winters is that those who plant their gardens with any thought of anything but the common nurseryman's rubbishing mixture—*Privet*, *Laurel*, &c.—should remember that there are hardy evergreens as well as tender evergreens, and that the noblest of them are natives of Britain, like *Holly*, *Yew*, *Ivy* and *Juniper*. It is difficult to pick out of other countries anything quite as good as these until we go to the *Pines*, like the *Silver Fir* and the *Cedar of Lebanon*, because a good many of the *Californian* conifers are not fit to endure such winters as this, and even the *Corsican Fir*, with all its good qualities, is occasionally killed towards the north of France. Many *Californian* conifers will do in various parts of the country. Some places are kinder to the *Douglas Fir* and the *Wellingtonia* than others, and here and there they seem to do very well; but this fact is not nearly so important for us as to find out the evergreens of other countries that may really be trusted in ours. Considering the cost and care of choice plantations, it is a poor return to wake up some spring morning and find them all either dead or half way to it.

Another friend writes from France that at Cannes the gardens have been "destroyed by 8° (C.) of frost and 1 foot of snow. People there never saw such a calamity." This should be a lesson to us as well as to the people of the south of France, who are continually trying to give to their hard white villas an absurdly tropical look with all sorts of delicate *Palms* and *Aloes*, instead of developing the many beautiful things, not omitting their own *Heaths* and native bushes and trees like *Hex*, which are quite hardy and beautiful there. One of the few really beautiful gardens we ever saw there was that of the *Comte de Paris*, which was almost abandoned to the tree, *Heath*, and other delightful plants of the coast. However, people rarely think of the beautiful things of their own country, but are always trying how far they may go with exotics, and so have to pay for their ways now and then.—*Field*.



## STOVE AND GREENHOUSE.

## LACHENALIAS IN BASKETS.

OF late years more attention has been paid to Lachenalias, so that we have some beautiful hybrids and seedlings quite distinct from the older forms. The kind illustrated (*Lachenalia tricolor*) makes a charming basket plant, and Lachenalias are not grown in this way so much as they deserve. We have so few flowering plants at this season of the year which do well in baskets, that it is surprising the stronger-growing varieties are not more grown in this way, the flowers lasting long and the plants of simple culture. The illustration depicts a charming basket of Lachenalias, the drooping leaves and flower-spikes having a more natural aspect than

grown in baskets give ample width between the wires, as the growths can readily push out at the sides of the basket. I have some very light baskets, home-made, with a few cross supports and strong rim, the other portion being 2-inch wire netting. A good effect can be got by using two or three varieties if sorts are selected which bloom at the same time. The baskets should be lined with fresh Sphagnum Moss. I prefer live Moss, as if the bottom of the basket be damped when suspended, it presents a neater appearance than dried Moss. Use a compost of turfy loam, dried cow manure and sharp sand. If the loam be heavy, use a portion of leaf soil. Lachenalias should be put into boxes or pots in August before the new root-growth commences. Give free drainage and grow them in a cool house or frame, as they



*Lachenalia tricolor* in a hanging basket. Engraved for THE GARDEN from a photograph sent by Mr. F. H. D. Kemplen, Dunedin, N.Z.

when the plants are grown in pots. For baskets, *L. tricolor* is one of the best, having bold leaves, dark green spotted with dull purple, and about 1 foot in length when the bulbs are well grown. This kind blooms early in March, the flowers being of bright colour. *L. Nelsoni* and *L. luteola* bloom early and are of great beauty, being in advance of the one illustrated, so a succession of flower is obtained. These kinds differ in the colour of the bloom, the first named being a newer hybrid than *L. tricolor* and has golden yellow flowers. *L. luteola* is well worth growing in all collections. *L. pendula* is of more drooping habit than those named, the flowers being of a deep purple-red and yellow colour, set on a stout stalk and drooping. This is one of the showiest of the species, but not better than *tricolor* for baskets. There are many others, but those named are best for baskets. Lachenalias can be grown in frames and with little heat. When

winter best in a structure just free of frost. The plants in baskets are placed in a cold fernery, pot plants being grown on a cool ash bottom in cold frames. Those who may not have the space to grow these in baskets at the start may readily use 9-inch or 12-inch pans and then place in shallow baskets in January, or the pans may be suspended. It is not necessary to disturb the plants in baskets every season, as if they are well fed they like frequent supplies of liquid manure when growing. Dip the pans or baskets in water once or twice a week and thus keep the flowers dry. When in bloom Lachenalias enjoy a cool house, plenty of light and moisture after flowering. They require ripening by free exposure to light and less water. When the leaves die away store them as cool as possible, keeping quite dry till potting time, when the bulbs should be shaken out, sorted into sizes and potted up. W.

## TREE CARNATIONS.

THE note by "J. C." at p. 128 suggests a few remarks on this, one of the sweetest and most desirable of all our garden plants. Duke of York is the most beautiful of all the Tree Carnations in its colour of rich deep crimson, surpassing Uriah Pike. It is a taller growing plant and does not produce so many flowers. The flowers are well formed and not very liable to burst. "J. C." seems to fancy that Uriah Pike will not make much "grass." This surmise is incorrect. Uriah Pike makes grass more freely than most of the Tree Carnations, but in its growth it does not run up so freely as some others; consequently it does not produce pipings very freely from the main stem. Although I much prefer the individual flowers of Duke of York to those of Uriah Pike, still in some respects the latter may be considered quite as valuable for the garden. I do not disparage it, and in our own garden we grow equal quantities of both, and recommend my friends to grow both of them.

I am growing as many as I can get of the lovely pink variety *Mlle. Terese Franco*. It is an Italian seedling, and it grows very freely, being also most useful for winter blooming. I do not know any white variety more free than *Mlle. Carle*; the flowers will occasionally come with a slight dash or line of white in the petals, but when the flowers open at midwinter or in January and February, they are generally pure white. More vigorous in growth, but producing fewer flowers, are *Purity* and *Mrs. Moore*; they resemble one another greatly, and I do not know that it is necessary to grow both. They produce lovely pure white flowers. I must not omit *Miss Joliffe*, although I grow one under the name of *Miss Joliffe Improved*. How it came to be improved I cannot say, but the improvement seems to be on paper only. *Winter Cheer* is yet (I think) the best scarlet for flowering in winter, but a variety named *Zouave* gives larger and brighter flowers in spring. *Mrs. Lewelyn* is a very handsome pink or rose-coloured variety, and altogether distinct from *Miss Joliffe* or *Terese Franco*. It does not produce so many flowers, nor is it so good for midwinter flowering, but lovely in the spring months.

Now is the time to get up a good stock of plants by cuttings or "pipings," to use the phrase of the florists. Shakespeare uses a better word, "slips." "I'll not put dibble in earth to plant one slip of them," quoth *Perdita*, but she had lost her temper, for were they not "the fairest flowers of the season?" They are slips; the small growths slipped off from the axils of the leaves are the best, and they are merely dabbled into small well drained pots of fine sandy soil, the soil being pressed firmly around the base of the slips. At this time of the year they do best in a propagating house with a little bottom-heat; and to make sure of their striking well, they ought to be placed in a frame or glass light inside the house, but if none of these appliances are available, a square or two of glass should be laid on the tops of the labels. The object is to retain the moisture about the slips until they have formed roots. Practical gardeners know well how to manage such slips and the young plants after they are repotted by carefully inuring them to a light, airy greenhouse temperature, and exposing them to the frames and ultimately to the open air, for these slips put in now will not produce their flowers until late in the autumn and winter. Amateurs and others with but little experience in the culture of any kinds of plants make mistakes, which, though apparently very trivial to all appearance, may be productive of disaster. They are most likely to err in subjecting the young and tender plants too suddenly to changes of temperature, which may give them a check from which they would not be likely to recover. Another cause whereby injury might result to the plants is carelessness in repotting them. The newly-formed roots are, indeed, very tender, and more brittle than glass or egg-shell porcelain, so that great care is necessary in planting each one separately in what are termed thumb pots. I plunge the pots in bottom-heat again for

planting in beds are many of them admirably suited. I allude to such as Early Gem, ferrugineum, fragrans, and others of like habit. Andromeda and Kalmias in the atmosphere of towns and cities are of none too thriving a character. Where they will succeed, Andromeda japonica, A. arborea, and A. speciosa, with Kalmia angustifolia pumila and K. a. rubra, K. glauca and K. latifolia, with its variety K. l. myrtifolia, are all worthy of planting in beds. To these the hardy Heath and Menziesias will form excellent edgings. Such beds also form capital positions for growing different varieties of Liliium, including L. auratum. Aralia Sieboldi must not be overlooked for use as specimens or to group with other subtropical plants (it may not be hardy in all positions). Mahonia Aquifolium may be turned to good account for shady spots where an attempt to grow tender plants would end in failure. Daphne Cneorum should be added to the list with the dwarf Rhododendrons. Escallonia macrantha can be used for beds by pegging it down if that be desirable. E. Phillipiana is another species that can be recommended. In Euonymus radicans variegatus we have a most valuable edging plant, which ought to take the place of many a tender subject. It is propagated as easily as the bedding Calceolarias, and is one of the hardiest of its race. As a permanent edging it can be strongly recommended. Another splendid and most effective plant for edgings or massing is the best form of the Golden Privet (Ligustrum ovalifolium elegantissimum). This will undoubtedly be grown far more as its merits become known. Another excellent variety is L. lucidum tricolor. Olearia Haasti makes a fine display when grouped; its culture, like that of many more Japanese shrubs, is increasing. As a border plant Osmanthus ilicifolius is gaining in favour, being in addition a reliable town plant. The Golden Yew (Taxus baccata elegantissima) makes a splendid feature for a long time during the summer, a few plants grouped together having a rich appearance; it is also amenable to clipping, so as to form close edgings. In the Retinosporas alone there is quite a wealth from which to choose: the forms of R. obtusa, R. plumosa, R. filifera, and R. ericoides afford a splendid choice in various shades of colour. Cupressus Lawsoniana lutea is one of the best of all golden conifers, whilst in the various tints of other forms of the same species there is an abundant choice for colour effect. The extended planting of Evergreens of all kinds in gardens around London and other populous centres should be still further increased. My reason for giving this advice is because many of the Fir tree family are failures; old trees hold on, it is true, but to plant many young ones would give but poor results.

Upon referring to deciduous trees and shrubs we shall find also a great variety, the culture of which may with advantage be made more general. Of these I shall allude to the variegated or richly coloured forms chiefly. Our old friend Negundo fraxinifolia albo-variegata (the silvery Maple), as well as N. f. aureo-variegata (the golden form), are often seen in shrubberies, but when massed they produce a much finer effect either by themselves or when associated with other things as a contrast. Prunus Pissardi planted with the silvery Maple is a case in point, not crowded together, but with sufficient room between each plant for light and air to do their part. Such planting as this can be kept in bounds by annual prunings in both instances. Planted thus there is scope for an undergrowth of flowering plants. Calceolarias (yellow), Violas and Salvia patens are examples of what may be used. I have quoted La France Rose for bedding purposes. Supposing these, however, to be half-standard instead of dwarf plants and then plant between them such a Rose as Perle des Jardins, which, in addition to its beautiful yellow flowers, has deep bronzy-tinted foliage, we have another illustration of what may be done. Surely such a bed is better than one composed of scarlet or pink Geraniums, or even one of Colcus Verschaffelti. Cornus san-

guinea albo-variegata is another hardy plant well suited for massing. As a contrast thereto one or more of the Japanese Acers could be used; such, for instance, as Acer palmatum, A. palmatum atro-purpureum, A. dissectum or A. sanguineum, all of which are beautiful subjects when in foliage. This list of Acers could be extended, but those given are a few of the best. In large gardens, with plenty of scope for effect at a distance, the Golden Alder (A. glutinosa fol. aurea) might be planted. Berberis Thunbergi makes a splendid show of richly coloured foliage in the autumn months, being then very useful in a cut state to arrange with suitably coloured flowers. Besides the one Cornus already quoted there are other kinds worthy of note, as C. brachypoda variegata, a Japanese form, the type of which has the foliage of a deep crimson in the autumn; C. mas elegantissima aurea is of smaller growth, but very pretty; C. atro-sanguinea should also be noted. In the Copper Nut or Filbert we have another plant with dark foliage, which would contrast well with such as the variegated Acers. Of this I note there is also a golden variety. The Copper Filbert has been in cultivation many years, but seems to have escaped notice. The Golden Elder (Sambucus nigra aurea) is of quick growth; in many places I have seen it very effective in masses. Another variegated plant, Symphoricarpos vulgaris variegatus (the Snowberry) is worthy of notice for cutting, whilst I think it would also be amenable to pruning; in a cut state I have seen it very beautiful.

#### OTHER PLANTS.

As a dividing line to large beds I have seen Cotoneaster microphylla used with the best advantage; its use as a wall plant is well known. Alluding to wall plants, I am reminded of the Everlasting Peas, the culture of which is none too common. Wall plants are often neglected.

TENDER BEDDING PLANTS IN SMALL GARDENS, &c.—In small gardens it is my opinion that tender plants should be used considerably less, speaking proportionately, than they are even in larger ones. There are several reasons for this, not the least important being that of overcrowding whilst under glass, which has already been alluded to. In small gardens every part of the place comes more immediately under the eye; it is, therefore, of the greatest importance to have no more bare places from October until the end of May than can possibly be avoided. This can be provided for, it is true, by raising Primroses, Polyanthuses, Pansies, Wallflowers, Forget-me-nots and several other good things. This should as far as possible be done in every garden, but it is oftentimes left undone. These spring and early summer plants for the flower garden are both suitable and welcome in any garden, be it large or small. The complaint is sometimes made that in their use the summer bedding is delayed; this may be so in some instances, as in the use of too many Wallflowers. Primroses and Polyanthuses, however, would be over, so would the Forget-me-nots, whilst in the case of Pansies, which go on flowering for a long time, it is quite possible to plant the summer stock between them when these latter are plants of suitable character. Begonias could be managed in this way; so could Geraniums and any other but the dwarfest of plants. The one point to pay attention to is that of thoroughly preparing the beds in the autumn when this is to be done, and overcrowding in the case of the Pansies should be avoided. Early flowering bulbs are most attractive, but instead of planting them in beds I would prefer them in borders where they can remain after flowering rather than have to disturb as soon as the flowers have faded. This latter subject of beds in small gardens reminds me of one feature which in many a garden is too prominent—it is that of too many flower beds. Rather than have so many beds I would personally prefer to see the borders extended in front of the shrubs. This would allow of a greater expanse of turf, a most desirable feature without a doubt, thus enhancing the effect. To dot beds about upon a small lawn is

oftentimes meaningless, and all the more so if they happen to be of some fantastic shape. Tennis and other outdoor games have to be considered. These recreations could without a doubt be all the better provided for if the beds were fewer in number. The reduction in the numbers of the flower beds in many a large garden would be an advantage without a doubt. In looking through an illustrated book of the seats of the nobility and gentry, published in 1829, there is one most remarkable feature, viz., the absence of flower beds as compared with present day gardening in this respect. This might possibly be the other extreme, but surely an excessive display of flower beds is the worse of the two. A broad expanse of turf in front of the house is restful to the eye; this I should personally much prefer to any undue amount of colour. Clothe the walls of the house by all means with climbers and wall plants of sorts to suit the taste. Of these there is an abundant choice, so that no excuse can be made on this score either from point of flowers or of foliage, of evergreens as well as deciduous subjects.

There are other things to which allusion could be made in which hardy plants play an important part, such as Delphiniums, Peonies, Hyacinthus candicans, with a host of other bulbs, not forgetting even the Narcissi or Daffodils. Dahlias, again, have not been touched upon; still we cannot afford to miss them, more particularly the Cactus, the pompons, and the singles. These are easily propagated, taking no previous room under glass. Iceland Poppies should have been included; they are particularly useful. Cannas do not take a great amount of room, and then only from the time of starting; this latter item may in favourable spots be dispensed with by planting straight away in their summer quarters. Anemone japonica should be added to the herbaceous plants, whilst rockwork is quite worthy of an article to itself. The deciduous Magnolias have rarely had that attention bestowed upon them which their good qualities deservedly merit. It is impossible in this short space to name many things. Roses could be extended into a separate article. My chief object has been to give examples of what may be used as well as of methods that can be adopted. H.

## GARDEN FLORA.

### PLATE 1004.

#### THE GINGER-WORTS.

(WITH A COLOURED PLATE OF COSTUS SPECIOSUS.\*)

The Ginger-worts (of which this is one) are as a class very little known in gardens, though there are some beautiful flowering plants among them, of which especial mention may be made of the members of the genus Roscoea, Curcuma, Alpinia, Hedychium, and others, as well as Costus, one representative of which,

COSTUS SPECIOSUS, is herewith figured. This forms a mass of thick roots, from which are pushed up stout Bamboo-like shoots, but of a succulent nature. The largest leaves are a foot or nearly so in length and 4 inches to 5 inches wide, smooth on the upper surface and silky beneath. They are arranged in a spiral manner on the stems. The mode of flowering is very well shown in the accompanying plate, the stout stems being terminated by the red cone-like arrangement from whence the flowers are produced. The individual blooms do not last long, but a succession is kept up from one head for a considerable time, and in the case of a good flowering specimen the contrast between the large white flowers and the reddish bracts is very striking. The stems of this Costus reach a height of 4 feet to 5 feet. It was introduced from India as long ago as 1799.

\* DRAWN FOR THE GARDEN by H. G. Moon in the garden of Mr. Bennett-Pee. Lithographed and printed by Guillaume Severeys.





*C. IGNEUS*, the next to mention, is a remarkably showy member of the genus and supplies a colour but little represented among stove flowering plants. It forms, as does the last-named, a dense leafy clump, while the blossoms are also borne in cone-like heads. They are 2 inches or nearly so in diameter and of an intense deep orange colour. Like those of *C. speciosus*, they are thin in texture and do not remain long in perfection, but another point in common with the two is that a continued succession is maintained for a time. This *Costus* may be planted out in a warm house or grown altogether in pots; in either case, but more particularly with a large specimen, it will at times flower more or less nearly throughout the year. At Kew its bright coloured blossoms may be often seen. It was awarded a first-class certificate by the Royal Horticultural Society in December, 1893, the specimens being exhibited by Sir Trevor Lawrence. *C. igneus* is a native of Bahia, from whence it was introduced by M. Linden in 1882.

*C. AFER* is in general features after the manner of the two preceding. The leaves, however, are narrower and the flowers are somewhat smaller, their colour being white, with a yellow blotch on the lower segment. As a rule it is not so free-flowering as the other two. It is a native of Sierra Leone, and was introduced in 1821.

*C. MALORTIENSIS*, a species with golden yellow blossoms, sent to this country from Costa Rica in 1860, was figured in the *Botanical Magazine*, t. 5894, but whether it is now in cultivation I cannot say.

*C. MOSAICUS* is a decidedly ornamental plant from a foliage point of view, but the flowers I have not seen. In this the obliquely lanceolate leaves, which are about 4 inches long, are arranged in a spiral manner on succulent stems. The major portion of the leaf is of a silvery grey tint, arranged after a mosaic pattern, while in the centre is an irregular shaped band of dark green. Several other kinds are known; in fact, the genus consists of about twenty-five species, but very few of them are at present in cultivation.

#### CULTURE.

The culture of these different species of *Costus* is simple, they being all moisture-loving plants, that need a good free soil to root in. *C. speciosus* does well at Kew, and I once (though some years ago) saw it very fine at Glasnevin. *C. igneus*, too, used to be remarkably showy planted out in the Water Lily house at Pendell Court, as in the boggy soil there it grew rapidly and flowered nearly throughout the year. It will, however, succeed and flower well in pots treated much the same as the general run of stove plants, but with pretty liberal attention in the matter of water. A yellow turfy loam, lightened by leaf-mould, well-decayed manure, and sand will suit it well. A glass structure kept at a tropical temperature, and so arranged that the occupants may be planted out with an unlimited water supply, might be made an object of great beauty and at the same time furnish a very uncommon feature. Besides the *Papyrus* and *Nelumbium speciosum*, which at once suggest themselves, we have some of these species of *Costus* and several other allied plants. Thus *Alpinia nutans*, with its nodding racemes of beautifully marked blossoms, and the distinct *A. nutica* would be just at home, and so would the *Hedychium*s, particularly *H. coronarium*, with its large white, sweet-scented flowers. H. P.

**Greenhouse Dracænas.**—Of these there is a good variety as regards size of plant and style of growth, it being an easy matter to adapt one or the other in various sizes to nearly every form of decoration either under glass in cool houses all the year, or for half the year outside in favourable positions and the other half inside. *D. australis* is a very variable plant. The type has long and comparatively narrow leaves with green midribs,

being very graceful even in a small state. *D. australis* Veitchi differs in having the midribs of a bronzy red shade, and is slightly more robust on the whole. *D. australis lineata* is a plant of noble growth, with its leaves twice or thrice as wide as the species. As a decorative plant in a tall house this makes a grand subject. *D. australis variegata* (to simplify the name of *D. Doucetti*) requires more warmth than that of the ordinary cool house, so as to retain its true character, then it is a handsome plant. *D. rubra* (so named from the colour of its flowers) is one of the hardiest of decorative plants: of this there is also a bronzy-foliated form when the foliage is developing, making it quite distinct from the species. *D. congesta* makes a charming vase plant in a small state, also as a table plant, but its culture is much neglected.—G.

## THE WEEK'S WORK.

### KITCHEN GARDEN.

**TRANSPLANTING PEAS.**—Batches of Chelsea Gem selected early which were sown in small pots in December and placed at once in cold frames, being well protected during the recent inclement weather, will now be thoroughly hardened off, and should stand the ordeal of transplanting well. If, according to advice given in a former calendar, the snow was removed from Pea borders as soon as the thaw commenced, the turned-up soil will by this time have become sufficiently warmed to promote root action. In planting do not mutilate the roots, but merely part the ball in the centre, place them in the shallow trench, gently pressing the soil round the roots, and at once protect from cutting frosty winds by wooden troughs or small Fern boughs. As a guard against sparrows I always employ small irons similar to those used in the game of croquet; these are placed along the rows at intervals. Thin twine is then stretched from one to the other until a perfect arch is made. As the Peas increase in height the irons are raised until the sticks are put to them. Where the ground is not so warm and light as desirable, a quantity of finely sifted soil or that obtained from beneath the potting bench may be worked in amongst the roots. In very sheltered gardens the Peas may be stuck as soon as planted, a net being thrown over to keep sparrows at bay. Plenty of small twigs should be used between the main stocks to prevent the haulm falling through and also to act as a shelter. Those that were not raised until January, and then in heat, will need extra care in the hardening off, it being wise to wait a week or ten days longer before transplanting rather than to incur any danger of injury to the tender tops.

**SUCCESSIONAL SOWING.**—The season being so far advanced, open-air sowings may be made without fear. As second earlies could not be sown early in February owing to the frost-bound character of the soil, they may now be got in, and with greater certainty of doing well, the sun's power now being considerable. In this section Exonian and Criterion are as satisfactory as any, the former being ready for gathering a week or so before the latter. To follow these some of the larger wrinkled Marrows may be sown—Stonebridge Marrow, Duke of Albany, Exhibition Marrowfat, and Prodigy, all being excellent. If ground can be spared a width of 5 feet or 6 feet should be allowed between the rows, this allowing for rows of Spinach between to grow freely without being trampled upon. If the position is open and sunny, the small forcing varieties of Cauliflowers may also be grown between. By all means avoid sowing thickly, although this season, owing to the indifferent harvest of 1894, rather thicker sowings than usual will be advisable, thinning later on if too crowded. The above varieties being of a very branching habit, ordinary drills should not be made, but openings taken out with the spade. A row or two of that good old Pea Stratagem may

also be sown now. It is of a most convenient height and of grand flavour, continuing to form pods over a long period. On poor shallow soils trenches may be taken out and well lined with manure, always providing the situation is not low. Where this is the case moderately deep drills are the safest, a good mulch of rich manure being given when the Peas come into bloom.

**BROAD BEANS.**—Early batches raised in heat and duly hardened off will be ready for removal to the garden by the third week in March. Sowing in small pots is a great advantage, as then they can be placed in position with little or no root disturbance. Plant in shallow drills, drawn out if possible in the early part of the day and exposed to the sun's rays until the afternoon; afterwards gently draw and press the soil around the balls, and give protection in the same way as recommended for early Peas. These rows will afford full sized pods some time before even the autumn-sown Mazagans or January-sown Green Windsors. Another and rather extensive sowing should now be made where this class of Bean is esteemed through the summer months, and, instead of drawing drills, dibble the Beans in rows 1 foot apart and 6 inches between the seed. This non-disturbance of the ground, which should be solid, by reason of having been dug in autumn, will enable it to retain moisture better. At this time several varieties should be sown in order to secure a succession. Seville Longpod, still one of the most profitable and best flavoured Beans; Veitch's Improved Longpod is also a capital variety, containing more Beans than the majority of extra long-podded sorts. Where large Beans are an objection, the dwarf and free-yielding Beck's Green Gem may be sown. This variety is most convenient, as being dwarf it does not fall about like the others and the Beans are small and deep green in colour, this rendering them especially useful for the dining room.

**SOWING SMALL SEEDS.**—In all but the latest and coldest districts the earliest open-air sowing of Cabbage, Cauliflower, Lettuce, and some of the earliest Broccoli may be made, also Leeks for a late supply. If the autumn-planted hand-light Cauliflowers have passed through the frost safely, they will be closely followed at the beginning of July by Walcheren raised in boxes in heat or sown in the early Carrot frame. Seed of Walcheren, Pearl, and Eclipse sown now on a sunny aspect and in a warm soil will keep up the supply from the beginning to the end of August. Autumn Giant may likewise be sown for coming in during September. Broccoli, which take a long season of growth, such as Cooling's Matchless Spring, Snow's Winter White, and Backhouse's Winter White, a splendid variety, may also be got in. Cabbage to follow spring heat-raised plants may be represented by Ellam's and Enfield Market, these two following each other in the order named. The main sowing of Brussels Sprouts must now take place. These may comprise Veitch's Exhibition, Paragon and Northaw Prize. Where early Savoys are in demand a sowing of Early Dwarf Elm and Green Curled will be advisable. Lettuce, both of the Cabbage and Cos sections, must also be included, small plantings of these at all times being preferable to large lots, many of which spoil before they can be eaten. I have found Alexander Cos to be a most excellent variety for hot summer weather, not bolting like many others, and developing large luscious heads in a very short space of time. Hick's Harly is another good sort, doing well if planted on a cool east border and in rich soil. Of Cabbage varieties, Continuity, Perfect Gem and All the Year Round are reliable, and good Lettuce must be thinned freely immediately the seedlings can be handled, or they soon spoil. Indeed, the same remark applies to all the above-named subjects.

**PARSLEY.**—If a good breadth of this is sown now on warm, well-drained soil, plenty of seed being used, it will afford a supply by June, when much of the winter beds will be running to seed. Moreover, if sufficient is left at thinning time, half the quantity may be transplanted several weeks later, this carrying on the supply till autumn, at

which time midsummer-sown batches will be ready for use. After sowing, sprinkle a good quantity of wood ashes in the drills, as Parsley is very liable to attacks from wireworm and grubs. That sown in heat in January will need gradually hardening off, so that early in April it may be transplanted in sheltered positions by the margins of walks or in front of espaliers. Frame-covered beds which have been closely picked may now have the soil between the rows loosened with a fork, after which all yellow leaf-stalks should be picked off and a dressing of artificial manure given. This, with increased sun heat, will soon induce the formation of fronds fit for use.

**SOWING HERBS.**—The present is a good time to sow such herbs as are not easily increased by division. On some soils also, especially in rainy springs, many offsets after planting die off, leaving sad gaps. These may be duly made up in June from plants raised from the present sowing, not planting singly, but grouping three or four plants together. The common and Lemon Thyme quickly germinate in heat, as also do the summer and winter Savories. Marjoram and Basil must also be included. An intermediate heat suits them best, and as soon as the seedlings appear, a warm frame from which the lights can be removed in fine weather. Where Lavender is esteemed, this may be increased by transplanting any of the lower offsets which may have rooted into the soil. These will grow away quickly and soon form fine bushes.

**CHILIES AND CAPSICUMS.**—In some establishments these are valued for kitchen use and pickles. Now is the time to sow the seed. A good strong heat is needed, and as soon as the seedlings can well be handled pot on, finally fruiting them in 6-inch pots and in an intermediate heat. Mammoth Red and Long Red are the best forms of Chilies, Capsicums being best represented by Monstrous Red, Prince of Wales, and Little Gem.

**TURNIP-ROOTED BEET.**—Where salads are in constant demand early Beet are essential, and as the long-shaped varieties will soon lose their virtue by growing away at the crowns, a row or two of the Egyptian Turnip-rooted may now be sown in an open sunny position. Where this cannot be afforded sowing must be deferred until the first week in April. Sow in very shallow drills and use a little wood ashes as recommended for Parsley. Sow plenty of seed, as independent of the liability to rot at this early date, Beet seed was not harvested in the best condition last autumn. I have sometimes sown early Beet in a box in warmth, gradually hardened them off, and transplanted them at the end of April with good results. In this case the young plants must be protected by small evergreen twigs.

**OPEN-AIR TOMATOES.**—The present time is in my opinion the most favourable for sowing Tomatoes for fruiting against walls out of doors. Some advocate earlier sowing, but in nine cases out of ten fine weather has to be waited for, and the plants become half starved and yellow, sometimes remaining for weeks in a stubborn condition after planting. If seed is sown now in a temperature of 60° at night, and the plants afterwards grown on under similar conditions until after the first shift is given, a sunny greenhouse will then suit them well for a fortnight, after which cool frames well protected by mats at night, cautiously aired until the middle of May, and fully exposed by day from then to the first week in June, they will then stand removal to walls with impunity. Of course some plan of protection must be devised, as the nights during June are sometimes cold and liable to injure the young succulent growths. Strong sticks, having their bottoms thrust into the ground and the upper ends resting against the wall, these being surrounded by mats at nightfall, are an effectual screen. Sow in single pots, not in boxes. In regard to varieties, there are several more suitable for outdoor culture than others. Amongst these the old Dwarf Orangefield is, in my opinion, still about the best when it can be obtained true. It is a hardy free grower, short in the joints, and yielding enormous clusters of fruit

from summit to base. Although not so symmetrical as the Perfection type, its flavour is of the finest. Laxton's Open Air and Sutton's First Crop are also both excellent for the purpose. Amateurs and others who have no walls may with every confidence plant against boarded fences facing south and shielded from cutting winds from east and west.

**SKROUTING LATE POTATOES.**—These in many instances have been hard hit with the intense frost, especially where the mounds were insufficiently covered with dry material previous to laying on the soil. The weather now being favourable, the whole stock should be overhauled, all frozen tubers removed, and the sound ones snibbed for the last time. If they can now be spread out somewhat thinly in some well-built shed and lightly covered with dry straw, the sprouts formed after this date will be of good length by the time planting takes place. If mild weather sets in between now and that date, the straw had better be removed altogether, the light increasing the strength and vigour of the new growths.

J. CRAWFORD.

### FRUIT HOUSES.

**EARLY PEACHES—STOPPING AND DEBUDDING.**—The weather during the past month in most parts of the country has been unfavourable for fruits requiring much sunshine and little fire heat in their early stages. Disbudding with very early forced trees cannot be commenced too early, at the same time removing surplus fruits and laying in a good foundation of wood for succession or extension of the trees. Disbudding will require daily attention, and is an important point in the culture of the Peach or Nectarine. Remove foreright shoots first, especially those near the ends of the shoots, or what may be termed the strongest growths, afterwards removing those on the lower portion. Take those shoots last which require pinching or what may be wanted to assist the fruits, stopping the shoots to the third leaf when close to the fruit. In disbudding, the grower must allow sufficient space for the development of the trees, as crowded wood means small fruits and much trouble from insect pests. Shortening back shoots before they attain much strength gives those which are required to be laid in at full length more room to develop, thus ensuring a mature or good fruiting wood for next season. If there be room for these shoots, reserve a shoot as much as possible on the upper portion of the branch, and as the flow of sap is always to the top, regulate the growths so as to get a good portion of strong wood at the base of the tree. My method is a simple one as regards extension of young trees. If a free growth be allowed for furnishing the trees, grossness is checked, and young trees the following season will carry more fruits. There will be less need, too, of the severe pruning often required to check undue luxuriance.

**SELECTION AND THINNING OF FRUIT.**—The thinning of the fruits is somewhat similar in detail to disbudding, and requires almost daily attention, healthy trees always setting far too much fruit. The modern practice of thinning the flower-buds before they open is excellent, but, of course, beginners need to exercise care at the start and remove a few of the thickly placed buds where signs of dropping are evident and the varieties are sure setters. Of course, these remarks do not apply to early trees at this date, but can with advantage be practised with those in succession houses. In their case there should be no fear of dropping, and the trees are often much weakened by setting far too many fruits. In the selection of fruits intended to mature when the flower-buds have been thinned previously the cultivator's task is much easier, as those buds which set are larger. A few soon take the lead, and are readily recognised as being better than others. In the final selection the best fruits as regards size, colour, and flavour are those on the upper surface of the trees when trained to the roof or over a semi-circular trellis, whilst those on back walls

should be prominent or face outwards, as the fruits are often deformed when left close to wires or pressed by growing shoots.

When finally thinning out the fruits, reduce all double ones to one at each eye or bud. Remove all badly placed fruits, and as regards the quantity of crop each tree should bear much depends upon the condition of the trees. Many growers crop freely and feed liberally, annually paying great attention to the trees, keeping the roots near the surface and feeding. The old regulation as to cropping was a fruit to every square foot of top-growth, and it has much to commend it if a fair crop of fine fruits be desired. When the fruits are swelling, syringe the trees overhead twice daily, moistening all portions of the trees, especially the upper portion, this being most exposed to sunshine, and if not kept moist soon gets infested with red spider. Maintain a moist growing atmosphere to assist swelling, damping all portions of the house. Give the trees liberal supplies of tepid water and liquid manure or a surface-dressing of a quick-acting fertiliser before watering. Close early in the day, syringe, and raise the temperature from 5° to 10° higher than the temperature given in the calendar a month ago.

**SUCCESSION HOUSES.**—These trees will now be in full flower and will set freely without much artificial fertilisation if due attention be paid to a free circulation of air, as in country districts bees are often busy during the early part of the day. Should there be any doubts regarding the flowers setting freely, run over the flowers with a rabbit or hare's tail tied to a short stick. Distribute the pollen about midday, as there is abundance of pollen on many varieties, some of the newer kinds, American introductions especially, not being such good setters as older kinds, and in their case it is not well to trust again to tapping the trees or even by insect-fertilisation. Much can be done to strengthen the bloom and maintain a healthy atmosphere by damping all parts of the house, reducing the moisture towards evening. Give air during the flowering stage on all favourable occasions both at the front and top, with a steady warmth in the pipes to keep up the desired temperature should the weather be changeable. The day temperature may be 60° with a drop of 7° to 10° at night; indeed, 50° even now will be a safe temperature in cold or windy weather, as Peaches require ample time at the start to ensure short-jointed wood and a free set.

**LATE HOUSES.**—These trees are far less forward than usual owing to the long-protracted frost, but with increased sun-heat will soon be on the move. Give all the air possible and fumigate such trees in succession for three evenings to get rid of fly. When the shoots are growing freely encourage growth, as there is no gain in retarding at this stage; by so doing growth is weakened. Syringe every morning if the weather be suitable, and as these trees show such a profusion of flower buds the advice given for earlier trees may be practised with advantage, and there will be no fear of bad setting. A light shaking will set the flowers with a free circulation of air. Before the flowering period give the borders a thorough soaking with rain water, which can often be better spared now than later. Should there be any doubts as to dryness, repeat the watering in a few days. Many crops are scanty through dryness at the roots. Doubtless in many cases the surface is moist, but lower down the earth is so much dried that moisture cannot penetrate it. Watering is always best done before the trees are in flower and again when the fruits are all set. To encourage growth from the time the trees are in bloom treat as advised for succession fruits by giving a day temperature of 55° with 10° lower at night. Begin to disbud as early as possible and ventilate freely in fine weather.

**HARDY FRUITS.—PEACHES AND NECTARINES.**—The trees are later this season than usual on open walls, but from this date the sun becomes more powerful. It is not well to delay pruning any longer, and with autumn-planted trees nailing in may be finished. Make the soil firm after the

frost and let the surface soil have a mulch later on, or moisture if required. I do not advise nailing of the shoots of the older or permanent trees till the last moment, as if these trees have been detached from the wall all the winter, by leaving the work to the last moment, growth is retarded and there is less need of covering with thick covers. Remove long naked branches, so as to lay in new fruiting wood, and open the upper portion of the trees as much as possible by lowering some of the stronger branches. It is not well to have all the fruit at the top or crowded; shorten the strong fruiting shoots to about two-thirds of their original length, cutting to a wood bud, and cut away weak or poor wood before nailing to give the fruiting wood all the space.

**PLANTING AND PROTECTING.**—There is little danger in planting now if the work be done quickly, and no lack of moisture both at roots and tops later on. We see how well these trees thrive in nurseries when lifted late. Too vigorous trees which do not fruit well may be lifted with a ball and replanted without fear of injury, thus saving the excessive pruning often necessary, which causes canker and in time total collapse of the trees. Though this work be much better done late in September or early in October when in full leaf, rather than lose a season it may be done now. Protecting must soon be considered, as birds are often troublesome in many gardens. Where they attack the trees, early covering is desirable. There is nothing better for this purpose than a square mesh net doubled or trebled, allowing the net to hang loosely, but quite clear of the tree. Strongly-made nets are even better than any other protection, as it preserves the bloom from frost and birds, at the same time admitting air freely. If birds are not troublesome, leave the covering till the latest moment possible, that is, when the flowers appear.

G. WYTHES.

## ORCHIDS.

### TRICHOCENTRUMS.

Of this genus there are upwards of a dozen species, many of which, however, are only to be met with in establishments where botanical plants are cultivated, whilst a few are really very beautiful flowers worthy a place in every collection. The genus was established some sixty years ago upon a species which up to the present time has not yet been introduced into cultivation. These plants are all natives of tropical America, and are very nearly allied to *Compantias*, which they very much resemble. They are dwarf-growing, epiphytal Orchids, quite destitute of pseudo-bulbs, and therefore require to be kept in a moist condition the whole year round, much less water, however, being requisite during the winter months than in the growing season. These plants in their native habitat grow mostly upon the branches of trees in shady positions, and under cultivation the best results have been obtained by placing them on blocks of wood or in shallow pans, the few kinds here mentioned producing flowers very freely when given this treatment and their other little wants carefully attended to. Sphagnum Moss is the only material that is needed when grown upon blocks, but for those which are placed in pans a little fibrous peat may be added. They are plants that require only a small amount of compost around their roots, and, as before mentioned, must be constantly kept in a moist condition. A moderately cool temperature will be found to suit them best, as at the cool end of the Cattleya house, and as the blooms are of fairly good substance, will continue in beauty for some time if not sprinkled with water from the syringe. Amongst

those most generally cultivated are the following handsome kinds :—

**T. ALBO-PURPUREUM** does not exceed 4 inches or 5 inches in height, the leaves being oblong, very fleshy, and bright glossy green. This kind was introduced about thirty years ago from Brazil and is one of the best kinds we have, producing beautiful blooms which measure nearly 2 inches in diameter. These are borne upon short peduncles singly and sometimes in pairs. The sepals and petals are similar, of a cinnamon-brown colour and tawny yellow on the outer surface; the lip is large, with a wide claw, white, spotted on each side with a purple blotch, and of a yellowish shade on the crest, the stout spur being also white.

**T. MACULATUM**.—This is a native of Colombia, where it grows at upwards of 5000 feet altitude, and although the individual blooms are not so large as in the previously mentioned kind, it is still a very desirable species with white flowers, which are spotted with reddish-crimson.

**T. ORTHOPLECTRUM**.—A very fine and handsome species, which first appeared in this country just twelve years ago. The flowers are large, with deep brown sepals and petals, tipped with yellow, the pure white lip having a blotch of bright crimson-lake on each side.

**T. PEARL**.—This is a very elegant little plant, with acute and clustered leaves, and growing to a height of about 4 inches. It usually produces two blooms upon a spike, which are pure white, marked with chestnut-red at the base. It comes from Central America.

**T. PORPHYRIO**.—A very showy kind, with large flowers, the sepals and petals being soft brown, bordered with yellow, and the lip magenta-purple, having a small white border and a yellow spot on the disc.

**T. TIGRINUM**.—This is a beautiful addition to the family, being a stronger grower, with larger and broader leaves. The flowers are also of fine substance, the sepals and petals light yellow, dotted with red, and the lip, which is large, is white, blotched with brownish-purple and suffused with yellow on the disc.

WM. HUGH GOWER.

**Restrepia elegans**.—The members of the genus to which this charming little plant belongs are allied to the *Masdevallias*. *R. elegans* is one of the best in the genus and a most interesting Orchid. It grows in tufts of little roundish stems about 3 inches high; these are scaly, and each bears a single dark green elliptical leaf. From the axils of these proceed the flower-scapes, each bearing usually a single flower. These are peculiarly constructed, the top sepals long and narrow, broader at the base, the lower sepals united; the petals are narrow, and stand out from the rest of the flower. The ground colour is chiefly yellow, streaked and spotted with crimson and purple. *R. elegans* was discovered by Dr. Korsten growing in cool, moist and shady woods at an elevation of 6000 feet in Caracacas. It thrives under cultivation in the cool house, and may be grown in well-drained pots in peat fibre and Sphagnum. It must not be dried at any time, less water being, of course, required during winter. The species was introduced to this country in 1850, but was grown on the Continent for some time previous to that date.—G.

**Odontoglossum maculatum**.—This is among the most useful of winter and early spring-flowering Orchids, easily grown, constant in flowering, and lasts a very long time in perfection. This, moreover, does not distress the plants to any appreciable extent, provided they are well established, strong, and well supplied with water at the roots. It makes an attractive plant when well grown and flowered; the pseudo-bulbs are oblong, about 3 inches high, bearing several broad, arching, light green leaves. The flower-spikes are produced from the base of these, and bear about six or eight flowers. The inside of the sepals and petals is rich nut brown, transversely barred with green and purple, and the latter thickly

spotted with reddish brown. The lip is yellow, roundish in front, wavy on the edge, with bright red spots. *O. maculatum* likes a slightly higher temperature than *O. crispum* and its allies, but if this is not at command, may be very well grown in the same house. It should be potted in peat fibre, chopped Sphagnum, and broken crocks, given good drainage, and elevated a little above the rims of the pots. The plants require no resting period. Before the flowers are past they commence to grow from the base of the pseudo-bulbs, and this is perhaps the best time to repot, disturbing the roots as little as possible. This Orchid perhaps more than any other in the genus is liable to the attacks of a soft brown scale. This is, however, very easily removed, and with ordinary care will not give much trouble. *O. maculatum* is an old plant in collections, being introduced from Mexico in 1838, where it is said to be very plentiful. It varies considerably in colour, some forms being much richer than others, but all are well worth a place in every collection.—G.

### CULTURE OF ODONTOGLOSSUMS.

THE remarkable degree of popularity to which the members of this fine genus have attained is a sufficient proof of their adaptability to cultivation and their great value as flowering plants. Probably no other large genus contains so few kinds that are difficult of cultivation; in fact there is hardly a species that, if grown in a suitable temperature, with ordinary care will not do well. The practice of keeping these Orchids in a high and moist atmosphere is happily becoming practically obsolete, the danger in the present day tending in the opposite direction, at least as far as the winter temperature is concerned. From a somewhat lengthened experience with these plants, I am convinced that although during the summer months it is hardly possible to keep such as *O. crispum*, *O. Pescatorei*, and *O. triumphans* too cool, yet a minimum temperature of 48° is quite low enough during the winter. Many of the species are very restless Orchids, *O. Halli*, for instance, frequently starting again into new growth as soon as the pseudo-bulbs are finished, yet flowering freely from each set of growths, the roots, too, being nearly always active. This being the case, it is evident that no lengthened period of rest is necessary, although for obvious reasons there must be a slight difference in the summer and winter temperature. *Odontoglossums* are truly alpine plants, and a constant and regular circulation of air must always be kept up in the structure in which they are growing. During the summer months the leaves may be absolutely blown about and kept almost constantly in motion by the wind, and they will be all the better for it, providing the atmosphere is kept well charged with moisture and the plants never get dry at the roots. This will give the pseudo-bulbs that bronzed or russetty appearance that all experienced growers delight in, the foliage also standing erect, stiff and springy to the touch. Plants of this description cannot fail to flower freely at the proper season without any drying off or other unnatural proceedings. A mistake frequently made with *Odontoglossums* is giving them too great a thickness of compost, this, too, occasionally being close and heavy with little or nothing to lighten it in any way, such as charcoal or potsherds, for the roots to cling to. A suitable mixture for these plants will be equal parts of peat fibre and Sphagnum, the crocks and charcoal being better added as the work proceeds. For medium-sized plants the pots should be filled to within an inch of the rims with crocks, leaving less or more in proportion for smaller or larger sizes, and this thickness of compost will be ample to steady the plants in position and to sustain their growth. The old compost should be removed carefully from about the roots, using a pointed stick between and around the pseudo-bulbs where there is not room to introduce the finger and thumb. This done and any decayed roots cut away, wrap a little Moss round those

remaining, place the plants in position so that the base of the leading pseudo-bulbs will be just clear of the compost when finished. Having plenty of finely broken crocks at hand, place a good sprinkling around the Moss and fill up with the compost firmly and neatly to the usual convex mound. Trim off all ragged ends and dibble in a few points of Sphagnum, as these are of great assistance in determining whether or not a plant is dry at the roots. After potting keep the plants rather on the dry side until the roots are seen to be again on the move, when gradually increase the supply as growth proceeds. On fine summer days the syringe must be freely plied among the pots to cause a moist atmosphere, and the plants bedewed overhead twice or thrice daily. A dense shade will be necessary during this period to keep the temperature as low as possible, not limiting this to any stated figure, but always maintaining a pleasantly cool, moist and airy atmosphere, such as feels refreshing on entering on a summer's day from the external air. With lean-to houses or pits having a north aspect this is comparatively easy, but on higher span-roofed structures it is far more difficult. In addition to the ordinary blinds it will often be found necessary to lay garden mats, previously well wetted, over the glass and to keep these moist by syringing. In houses of this latter description it is better to ventilate very freely on summer nights and to keep closer and heavily shaded during the daytime, otherwise it is impossible to keep the atmosphere sufficiently moist. Thus it will be seen that there is practically nothing to hinder the merest tyro from taking up the culture of this section, and as it undoubtedly contains some of the choicest and most beautiful species in the whole Orchid family, he will not be likely to lament his choice. H. R.

**Hybrid Cypripediums.**—In a recent issue you give *C. maculosum* as shown by me at the last meeting of the Royal Horticultural Society. When before the Orchid committee it was identified as *pavonianum*, raised by Mr. Drewett. I therefore wish to withdraw the name I gave it in ignorance of this fact.—F. M. BURTON, *Higfield, Gainsborough.*

**Cypripedium Boxalli.**—A very nice form of this species comes from Cheltenham, which has the dorsal sepal well spotted with very dark spots and the border very distinctly margined with white, the petals being of fine colour and the lip well formed. This plant was discovered by the well-known collector whose name it bears upwards of twenty years ago. It is by some authorities considered a variety of *C. villosum*.—W. H. G.

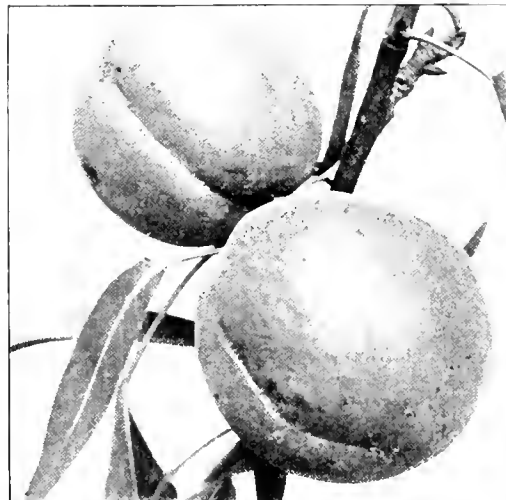
**Dendrobiums at Cheltenham.**—Amongst the fine Orchids cultivated by Mr. Cypher at his nurseries in Cheltenham are some beautiful kinds now in bloom, *D. nobile* and *D. Wardenianum* being represented in quantity, but of the rarer kinds there are also a large number. Of the last-named, the white variety, *D. Wardenianum album*, is decidedly worthy of notice, the flowers being of the purest white, excepting a small stain of pale yellow in the throat and two very small spots of light brown at the base. *D. crassinode* is also a good species, which flowers profusely at the present season; it is a very distinct plant even when not in flower. The blooms of this kind are produced in twos and threes from the swollen nodes at the upper portion of the stems, and are white, heavily tipped with mauve-purple on each segment: the lip is finely fringed, and has also a large blotch of mauve-purple at the base, a white zone running between the yellow disc and the purple tip. Amongst the hybrid kinds, *D. Leechianum* is one of the finest, being very conspicuous by its large bold flowers; the sepals and petals vary in different forms, from pure white tipped with purple to deep rose, also purple at the ends; the lip has a very downy appearance, is white, with a large blotch of deep rosy-purple at the base, from which run radiating lines of the same shade. *D. endocharis* is another

hybrid, having for its parents *D. japonicum* and *D. aureum* (this last is also one parent to *D. Leechianum*, *D. nobile* being the other). The pure white flowers of this kind are very chaste and beautiful, and, moreover, have a very pleasant fragrance.—W. H. S.

## ORCHARD AND FRUIT GARDEN.

### GOOD APRICOTS.

In many gardens the Apricot, no matter what variety be grown, is disappointing, the branches dying off. Some varieties are less subject to disease than others, and it is the best kinds which suffer most, such as Moorpark. Over-dryness at the roots does far more injury than frosts, and is often the cause of unfruitfulness and decay of the branches. The variety illustrated is less subject to disease, and it is valuable as a bush kind, this being the only Apricot that succeeds well in favoured localities, though there is a Continental variety, the *Alberge de Montgamet*, which is very hardy



*Apricot Breda.* From a photograph sent by Mr. Norman Blake, Bedford.

and can be grown as a standard. In my opinion, however, it is not equal in quality to *Breda*, which it much resembles. Both kinds are especially good for preserving. Of course soils and localities have much to do with successful culture, and a very hot summer is not the best for the trees in a light, poor soil, as we lost more branches after the hot summer of 1893 than in any other period in spite of careful watering. I well remember when a boy many cottagers having splendid trees on the gable ends of their cottages. The fruits were a source of income, helping to pay the rent. The trees were pruned very little, and to this latter cause I attribute much of their success or fruitfulness. Those who like Apricots would do well to grow them under glass, and, as is well known, there have been many failures to force when treated in the same way as other fruits. Many have tried pot culture in orchard houses, but this is not successful. In cold heavy soils with glass one can get reliable crops. For years these fruits should have glass protection much in the same way as orchard house trees, the only difference being that the trees are planted out and a large quantity

of the glass is removed after the fruits are gathered. Some good houses have only a glass roof, which checks frosts and prevents late growth by autumnal rains. The latter are often the cause of loss of branches. During growth the trees require unlimited supplies of moisture, but I would, if possible, limit the amount after growth is completed. With glass protection—the sides of the house being movable to admit air freely—splendid results are secured. Bush trees are best, allowing a short leg or stem of 18 inches clear of the soil. It is not necessary to use fire-heat, my preference for bush trees being that one can allow freedom of growth. There is little pruning if due attention be paid to stopping early in the growing season and the formation of fruit spurs. Trees under glass do not suffer from loss of branches as in the open, and if a gross growth results, lift the trees early in the autumn before the leaves turn colour. Glass copings or cases are of great use in the culture of these fruits, and if the former they should be movable, so as to admit rains at certain seasons of the year. Of course, with cases it is necessary to grow trained trees at the back of the wall, and I would advise what is termed half standards or trees grafted or budded on sufficient length of stem for the upper portion of the trees to be near the roof and in such a position as to get abundance of air.

Apricots blooming so early are the first fruits to require protection, and they do not like badly drained or clay soil. If a good depth of loam and such aids as charred refuse, wood ashes and mortar rubble can be given, I prefer to give manures on the surface in preference to mixing in the soil, as what is wanted is a sturdy growth with abundance of fruit spurs. This latter may be accomplished by using the knife early in the summer, by pinching or stopping, thus having little pruning to do when the trees are leafless. Gumming follows winter pruning if the trees are left to take their chance in the summer. Few fruits pay better for lifting to prevent undue luxuriance, and many trees suffer through having their roots buried too deeply. This can be remedied by lifting, and I would advise lifting young trees every three or four years, placing the roots nearer the surface and giving unlimited supplies of water and liquid manure during the growing season.

I have lifted trees twenty years old, and got fine crops of fruit when such trees have been on a bad aspect. In such cases lift before the leaves change colour and thoroughly water the roots. Syringe the tops daily after lifting till the leaves change or drop. In favoured localities the variety *Breda* does well in bush or standard form, but in most cases these fruits will repay for wall shelter.

As regards varieties, Moorpark is the best in quality, but it is not the most free cropping. The trees gum badly and limbs die wholesale. The fruit is handsome, of a brownish-orange colour, and where the Apricot thrives this variety should be grown, as the fruits are richer than others; in fact, it is a good early dessert fruit. For usefulness I give first place to *Hemskirk*, which grows more freely than Moorpark, does not die off so badly, and possesses what may be termed a better constitution. If only a small space can be devoted to Apricots, this kind should be one of the varieties selected. The fruit is large and of good quality. My next selection is *Breda*, which is invaluable for preserves or compotes in a dried state, but is



less juicy than those named. It is the hardiest of all the varieties, and, as stated previously, is the best for growing in the open in bush form. It may be termed a mid-season kind, and is mostly grown for the purpose named. Large Early is a valuable fruit, and should be selected by those who cannot grow the Moorpark or delicate kinds. I have grown this in cold or exposed positions when all others failed, the tree being of vigorous growth, very prolific, and the fruits large, of a rich orange colour, and very early. I always plant this variety, as it rarely fails to crop if the trees be allowed to extend freely and are not much pruned in their early stages. Royal is a similar fruit as regards growth, succeeding well in adverse soils, but not equal in flavour to Large Early. Shipley is well worth a trial. It is also known under the name of Blenheim, and is earlier than the old Moorpark, being a good preserving variety. The Peach is a very large fruit, rich and of free growth. It much resembles Moorpark in flavour; and Kaisha completes the list. The last is not a large fruit, but early and of rich flavour, and the trees crop freely. There are nearly twenty other varieties, but the few named I consider are the best.

G. WYTHES.

**Peach Dymond.**—Although I have known this variety for many years, I have not observed any susceptibility to the attack of aphides as mentioned by "W. S." (p. 94). There is something curious about the manner in which certain varieties are prone to attack in some gardens and not in others—as, for instance, Pine-apple Nectarine in a former situation was always infested with black aphid in the spring, no other variety being attacked, and which I have never seen in any other garden where the Pine-apple was grown.—W. G. C.

**Protecting tree stems from ground game.**—I have nowhere seen a simpler or better method of protecting the stems of standard trees from hares and rabbits than was adopted by the late Mr. J. James in his orchard at Farnham Royal when he planted it several years since. Wire mesh of some 2 feet broad was cut into short lengths and fastened securely, yet loosely round the stems without at all burying or fixing the wire. When rabbits come in contact with the wire the motion created serves to alarm them because so incomprehensible, and they keep away. The orchard in question covered some five or six acres of Grass land close to Burnham Beeches, and was almost surrounded by rabbit and hare infested woods, yet the immunity from injury was remarkable. Of course, this form of treatment could hardly be applied in the case of dwarf or bush trees. Then there is no safer method than in fixing a wire fence all round the orchard. Such wire fencing should be firstly of 3 feet depth, some 4 inches of the lower side being not only buried in the soil, but also held there by iron pegs. With even such fences rabbits are sometimes tempted to burrow deep and thus go under, for the severely fixed wire fence does not alarm them. Then if the fence be rather low they can easily leap over it. In these days of good market prices it is surprising that such pests as rabbits should be so much tolerated, yet there are millions in the country doing immense harm, whilst myriads of persons would be only too glad to purchase them for consumption at reasonable prices.—A. D.

**Lifting Vine roots.**—Many gardeners do not seem to be aware of the benefit which almost invariably follows the lifting of the roots of old Vines, providing the latter are not altogether worn out. From various causes, not the least being excessive top-dressings, Vine roots are often driven downwards in search of nourishment, and being then too far from the influence of sunlight and air, degenerate into fibreless thongs, inferior crops and shanked berries following in due course.

Such Vines are often condemned and rooted out, new borders being made and young Vines planted, but this expense might often be spared and better results obtained by carefully removing the soil, lifting and carefully preserving the roots, rectifying the drainage if necessary, and after incorporating some good sweet loam with a portion of the original soil, adding more rubble and some horse manure, relaying the roots on a firm bottom some 6 inches from the surface, and after cutting back any decayed or useless ends and freely notching the remainder, covering them first with an inch of extra sharp sandy soil, and finally with 5 inches of the ordinary soil. Many old Vines treated in this way yield far better crops of Grapes than they did when considered to be in their prime, or, say, the first ten years after planting. The work should be done when the foliage is changing colour, so that new rootlets may be formed even before the Vines go to rest. If needs be, Hamburgs may be forced early the following season, but it is always well where practicable to start the house a month later to give the Vines the best possible chance. Some Vines so treated last autumn have this year broken from a fortnight to three weeks earlier than for many years previous, and growth looks strong and healthy. Of course, if when the roots are lifted all new soil can be spared, so much the better.—J. C.

**Disbudding Peaches.**—In reading the article on disbudding Peaches on p. 25, I could not but notice the remarks of "W. G. C.," who says that he always does disbudding of Peaches himself. I think there are many young readers like myself who will be disagreeably surprised to hear that foremen are incapable of doing that work, and should say "W. G. C.'s" place is not a large establishment if he disbuds entirely himself. In places where there are three or four Peach houses and perhaps 200 yards of Peach casing, the gardener would have many other duties to attend to other than Peach-disbudding. What a blow to all foremen aspiring to the position of head gardener to hear that they are deficient in that branch of gardening, also to know, if they are lucky in getting into a good place, that they cannot depend upon a foreman. What are they to do then? Must they ask advice from older hands? In my opinion, in many of our finest gardens the Peaches are under the management of foremen trained by their former masters. There are very many painstaking and energetic young men at the present time who no doubt can (and are) depended upon to do satisfactorily the by no means hard task of disbudding Peaches.—FOREMAN.

**Apple Loddington Seedling.**—The note on this kitchen Apple (p. 111) by "S. H." only serves to show more plainly that while a certain variety behaves in the best possible manner in one district, in another its success is reduced almost to a minimum. Nowhere have I seen this Apple (which is more often known under the name of Stone's, owing to the fact of the original tree being found on Mr. Stone's farm at Loddington, in Kent) giving such good results as at Barham Court, where Mr. Woodward finds that it flourishes remarkably well in loamy, porous soil of good depth. Here in our heavier retentive soil the branches show a disposition to canker, and at no time since planted have our trees given even a fair crop.—E. M.

**Cherry St. Margaret.**—Most of the best fruits receive so many synonyms that it is difficult for those with only a slight knowledge of varieties to judge or understand why the kind named St. Margaret should be called Black Heart, Large Black Bigarreau, Elkhorn, and Tradescant's Heart, the names also being changed in some places to that of the locality. Despite this drawback, the above variety is a grand fruit, and one of the most useful late varieties we have. It is a large black fruit, very late, and well adapted for wall or cool house culture. In the latter it is splendid, and being protected from moisture and birds is very fine for dessert. The flesh is sweet with a brisk flavour and the tree is very free. I do not recommend it for bush or

pyramid form in the open, as it is difficult to keep free of birds, but it is well worth wall culture, the trees being well supplied with moisture in the shape of liquid manure or a mulch of decayed manure to keep the surface roots active. Being later than many of the dessert Cherries, it is worth planting in every garden where good dessert fruits are wanted in quantity and of the best quality.—G. WYTHES.

**Apple Gascoigne's Scarlet Seedling.**—From the growth made by trees in the garden here the last three years it appears to me that this Apple will require much space to get good results. Where space is limited, root-pruning must be practised vigorously to induce fruitfulness. In Kent, where this Apple is remarkably well grown, the trees have abundance of room to develop their branches without root-pruning, the consequence being fine crops of well-coloured fruit, which cannot fail to find a ready market. Not only is this Apple showy, but the quality is such as to place it in the first rank as a kitchen or dessert fruit during the early part of the winter months.—E. M., *Hants.*

**Apple Devonshire Quarrenden.**—This Apple is much grown here in cottage gardens. So well does it succeed, that many of the cottagers make the most of their rent from a few old standard trees. The fruit always commands a ready sale at 7s. 6d. per bushel. It is the first dessert Apple ready for use in quantity in this part. In some gardens where the soil is inclined to be heavy and retentive of moisture the trees are liable to canker and become thickly infested with Moss and Lichen, which check their free growth. Where the soil is loamy and fairly dry this Apple succeeds admirably. Two years since I counted 130 full-sized fruits on one branch a yard long.—E. M., *Bishop's Waltham.*

#### APPLES.

THE correspondent on p. 113 who expresses himself as perfectly astounded at any depreciatory remarks levelled at Cox's Orange Pippin must surely be aware of the imperative necessity of taking soil and site, the first named especially, into consideration when Apples are planted, and that in the case of some varieties peculiar conditions render successful culture well-nigh impossible. It is, or should be, the aim of every gardener to find out the sorts that are thoroughly satisfactory and to plant them as much as possible to the exclusion of others, and it is hardly likely that well-known growers will exclude a high-class Apple unless it be found wanting in some respect. I think the remarks made by "A. Y. A." will be welcomed by all those who have found a difficulty in growing the variety above named, Ribston Pippin, Margil, and one or two more. It would be difficult to find a more striking instance of the likes and dislikes of the Ribston in a limited area than is furnished by our cankered trees (which are being gradually worked out) and the magnificent specimens at Pain's Hill, probably about the finest espalier Ribstons in the kingdom, a sight when laden with fruit to gladden the eyes of any fruit tree lover. They are growing in a very old low-lying kitchen garden in rich black soil, apparently of great depth. Cox's certainly does better with me than Ribston, but it cannot be pronounced a success, being below average both in crop and size and the fruit destitute of colour. To speak well of the "bridge that carries one over" is a sound maxim in fruit growing, and for our light sandy soil the best dessert Apples are King of Pippins, Adams' Pearmain, Cornish Aromatic, and Cockle Pippin, great and consistent croppers, and giving fruit of fair average size. Cornish Gilliflower crops fairly well, but unless the trees are netted quite early in the season the fruit is of little use; the blackbird seems perfectly aware of its high quality and makes a persistent attack directly the bush fruits are over. A good word has been said for Mannington's Pearmain. It does very well here, but I should not grow it in preference to the two latest of the four varieties above named.

E. BURRELL.

## FLOWER GARDEN.

## LILIUM LONGIFLORUM HARRISI.

THERE are two widely divergent opinions concerning this Lily, depending upon the standpoint from which it is viewed, for by the botanist it is regarded (and rightly so) as a variety of *L. longiflorum*, while the horticulturist usually considers it a distinct species under the name of *Lilium Harrisii*. It is undoubtedly the most popular Lily in cultivation at the present time, and is grown in immense numbers by all our florists. A striking proof of its popularity is furnished by the fact that it is indeed rare during several months of the year to pass a florist's establishment without seeing its long pure white blossoms exposed for sale either in a cut state or on growing plants in pots. The quantity of this Lily that passes through Covent Garden Market alone during the season must be something enormous. It is now twelve years since *Lilium Harrisii* was sent here from Bermuda, and at that time among the several distinctive features claimed for it was that it flowered so much earlier than *L. longiflorum*, while after blooming, secondary stems were pushed up, which in their turn produced blossoms.

This is strictly true as far as freshly imported bulbs are concerned, but after one season's growth in this country it does not (under the same conditions) flower any or but little earlier than the other members of the longiflorum group, and in another year the difference, if any, totally disappears. Its precocious character is induced by the conditions under which the bulbs have been grown, for not only do they attain a greater vigour in Bermuda than they do with us, but the season is also so much earlier, that we receive thoroughly well ripened bulbs from there before those in this country are out of bloom. The earliest bulbs reach here by the end of July, and in another month they are widely distributed throughout the country. As the bulbs at that time are ready to push forth roots at the base, they should for early flowering at least be potted directly they are received and kept moderately moist till growth commences. A cold frame just to keep off any unusual quantity of rain will suit them well when first potted, or they may be stood out of doors and covered with ashes, as is done in the case of Hyacinths and other bulbs when grown in quantity. If this latter treatment is followed, care must be taken that the covering is removed as soon as the shoots get clear of the soil, otherwise they will be greatly weakened thereby. The protection of a greenhouse will suit this Lily well during the winter, but its cultivation has been so often dwelt upon in THE GARDEN, that nothing more remains to be said on that point, except to call attention to the great damage quickly done by aphides if they are allowed to effect a lodgment on the plants. They first of all attack the young unfolding leaves in the centre of the plant, and unless closely inspected their presence may not be noticed till irreparable injury is done, for the embryo flower-buds are situated there, and a few punctures from these insects will cause the blossoms to be deformed. In speaking above of the great advantages of early potting for those that are needed to bloom first, it is as well to point out that most of the Bermuda bulbs are received here at much the same time, and are kept in their boxes on shelves in dealers' warehouses or similar places not con-

ducive to their welfare, for this, in common with all other Lilies, suffers a good deal if kept dry after the usual season to recommence growth has come round. It is true many will flower if not potted till the end of the year or later, but they are altogether wanting in the vigour of the early potted ones. Thus for later blooming pot fairly early, and keep as cool as is consistent with safety during the winter. Apart from its merits as a pot plant, the Bermuda Lily is also an object of great beauty when grown out of doors, as it will flower beautifully in this way. If the bulbs are planted in the autumn, the young shoots will frequently appear above ground by the winter, when a little loose litter may be sprinkled over for protection, though they may not require it, for I have some that were at the commencement of this year an inch above ground, and not being covered in any way they were frozen for weeks, and as far as one can at present judge, with the exception of a few out-

besides these above-mentioned there are also *Wilsoni*, *eximeum*, *grandiflorum*, *densatum*, *Takesima*, *Mme. von Siebold*, *albo-marginatum*, and *roseo-marginatum*. It must not be supposed that all of the above represent a distinct form, for if grown together for two or three years many of their points of difference will disappear. H. P.

## SELECTED VARIETIES OF CARNATIONS.

THE National Carnation and Picotee Society (Southern Section) have just published their report for the year 1894, showing a balance in the hands of the treasurer of £160. The exhibition for next season will be held in the central transept of the Crystal Palace, and a sum of £150 will be given in prizes, but the most interesting part of the report is the returns from twenty-two members and exhibitors of the society, giving a selected list of varieties. The Carnation and Picotee for purposes of exhibition are divided into thirteen



Group of *Lilium longiflorum Harrisii*. Engraved for THE GARDEN from a photograph sent by Miss Willmott, Warley Place, Great Warley, Essex.

side leaves, they do not seem to have suffered any particular injury. When this Lily was first sent here from Bermuda in quantity there used to be a sprinkling of the typical *L. longiflorum*, but of late years the stock seems to be quite true. The typical kind is in many respects much inferior to the variety *Harrisii*. When attention was first directed to this Lily it was at times sold under two names, *Harrisii* and *floribundum*, but this last seems now to be altogether dropped, and rightly so, as the two were really identical. The specific name of longiflorum conferred upon the type is now somewhat of a misnomer, as in length of bloom it is surpassed not only by its own varieties, but also by *L. neilgherrense* and *L. philippense* as well. *L. longiflorum* is not only shorter in the tube than its variety *Harrisii*, but the flower is more erect, and there are also less blooms on a stem. Large numbers of a variety much like *Harrisii* are sent here from Japan during the winter, but though they will flower well, the bulbs are not nearly so large as the Bermuda-grown ones. Varietal names have been bestowed pretty freely in the case of *L. longiflorum*, as

classes, and it is these divisions and sub-divisions that puzzle the amateur when first attempting the culture of these fine garden flowers, but anyone with the least knowledge of colours can readily distinguish the different classes.

When the "Carnation Manual" was published by the society three years ago similar returns were obtained, and a comparison between the two is interesting. In the classes of flakes and bizarres the best twenty-four varieties are as follows, and the number of votes are given to each: Robert Houlgrave, 17; Robert Lord, 14; Admiral Curzon, 14—same as in 1892. Crimson bizarres: Master Fred, 15; Rifleman, 13; J. D. Hextall, 12. In 1892 Harrison Weir was second, Rifleman first, and Master Fred third. Pink and purple bizarres: William Skirving, 18; Sarah Payne, 17; Harmony, 7. In 1892 Mrs. Barlow occupied the place of Harmony. Purple flakes: James Douglas, 18; Charles Henwood, 17; George Melville, 11. In 1892 Gordon Lewis held the place of Charles Henwood. Scarlet flakes: Sportsman, 18; Alismond, 15; Miss Constance Grahame, 13. Miss Constance Grahame has taken the place of Matador, which has fallen into the fourth place. Rose flakes: Thalia, 16; Rob Roy, 15; Sybil, 11. Thalia stood at the top with 17 in 1892, Sybil next with 16,

Rob Roy 12. The above twenty-four varieties is a selection from seventy-eight, and as they are all well known and cultivated by the fanciers, they may be depended upon to be the best selection obtainable. The best eighteen Picotees come out as under: Heavy red edge: Brunette, 16; John Smith, 16; Ganymede, 15. The last-named is a new one, and has rapidly risen to a high position. It has taken the place of B. Bryant. Light edged red: Thomas William, 18; Mrs. Gorton, 18; Miss Violet Douglas, 16. The same three headed the list in 1892 with 17 votes each. Heavy purple edged: Muriel, 18; Amy Robsart, 15; Zerlina, 14. In 1892 they stood with Mrs. Chancellor second and Amy Robsart in the fourth place. Light purple edged: Ann Lord, 17; Clara Penson, 15; Mary, 13. In 1892 they held the same position. Heavy rose and scarlet: Mrs. Sharpe, 18; Mrs. Payne, 14; Little Phil, 14. Edith D'Ombraïn held the place in 1892 now occupied by Little Phil. Light rose and scarlet edged: Liddington's Favourite, 18; Nellie, 16; Ethel, 11. The same as 1892. The above selection is from sixty-nine varieties. In the yellow ground Picotees the best eighteen varieties are: Mrs. R. Sydenham, 17; Countess of Jersey, 17; Lillian, 14; Agnes Chambers, 13; Annie Douglas, 12; Mrs. Henwood, 12; Mrs. Whitbourn, 10; Almira, 7; Mrs. Douglas, 7; Ladas, 7; Aurora, 6; Mrs. Dranfield, 6; Florrie Henwood, 6; Stadraath Bail, 5; Undine, 5; Mrs. Alfred Tate, 4; Romulus, 4; Chrysolora, 4. The best twenty-four self-coloured varieties are: Hayes' Scarlet, 10; Niphotos, 9; Germania, 9; Waterwitch, 8; King of Crimson, 7; Mrs. Louisa Jameson, 7; Mephisto, 6; Ruby, 6; Miss Audrey Campbell, 5; Miss Ellen Terry, 5; Mrs. R. Hole, 5; King of Scarlets, 5; Mrs. Fred, 5; Emmie, 4; Oriflamme, 3; Kettin Rose, 3; Burn Pink, 3; Lady Gwendoline, 3; Meteor, 3; Duke of Orleans, 3; King Arthur, 3; Eudoxia, 3; Royal Purple, 3; Abigail, 3. Some of the above yellow ground Picotees and self-coloured Carnations will take higher positions when they are better known. Amongst yellow ground varieties, Mrs. Douglas, Ladas, Mrs. Dranfield, Florrie Henwood, Mrs. Alfred Tate, President Carnot, and Mrs. Gooden have not yet been grown by anyone except the raisers of them. It is very remarkable that Hayes' Scarlet in self should go at one bound to the top of the list, but it is evidence of the superior quality of that variety. Niphotos holds a very high position, as coming in second. Other new varieties, as Waterwitch, Mephisto, Miss Audrey Campbell, Miss Ellen Terry, Duke of Orleans, King Arthur, Eudoxia, and Royal Purple, will certainly go up higher when they are grown as border varieties. At present they, like the yellow ground varieties, have been confined to a very restricted area.

J. DOUGLAS.

## BOOKS.

### THE STUDENT'S ENGLISH DICTIONARY.\*

ALTHOUGH not too large for convenient reference, this dictionary seems very complete. A dictionary intended for the use of students, and as such occupying a place midway between a school dictionary and a bulky lexicon, it seems to fulfil its purpose admirably. Although nominally a new edition, its editor claims for it that it is in fact a new work, "since not only have all the old articles been thoroughly revised and to a great extent re-written, but many thousands of additional articles have been inserted." What is a new feature, we think, as regards dictionaries, and a valuable addition to the present work, will be found in the appendices composing a list of names in fiction, mythology, &c., and a key to literary allusions. Thus to take a few familiar instances: Under the head of "Heep," Uriah is summed up as "clerk to Mr. Wickfield, the lawyer, in Dickens's 'David Copperfield,' a sneaking and malignant character,

\* "The Student's English Dictionary." By John Ogilvie, LL.D., being a new edition, revised and greatly augmented by Charles Anandale, M.A., LL.D.

always proclaiming how 'umble he is,' &c., and "Peebles," Peter, in Scott's "Redgauntlet," "a disreputable pauper with a craze for litigation," and so on with more or less detail, the student sees at a glance the main points of a character he perhaps frequently hears mentioned in conversation without being put to the trouble of reading up the character in the original. So also names which frequently occur when old myths and legends are talked about. There are also lists of English authors with dates, a pronouncing list of classical and scriptural names, &c., together with nearly eight hundred engravings on wood: it is printed in clear and readable type, and the price, 7s. 6d., is not by any means exorbitant.

### THE FOREST FLORA OF JAPAN.\*

JAPAN has come in for a good deal of patting on the back of late. It has become the fashion to write books about Japan. In adopting Western forms of government and ideas, at least outwardly, and taking advantage of the most modern inventions and appliances of Western science, she has shown an adaptability all the more remarkable because so contrary to the traditions, the customs and the spirit of Eastern peoples. Her marvellous and unsuspected good fortune in her hostilities with her larger, richer, more populous, but conservative and backward neighbour have won for Japan a host of admirers, some of them even sincere. The present work is only one of many books about Japan we have recently had the pleasure of reviewing, and it is certainly not the least valuable contribution to Japanese literature. Japan's wealth in tree species is perhaps not surpassed by any country of the world. It has been shown that, rich as Eastern America is in the extent and variety of her forest produce, Japan and the regions north of it, in spite of their comparatively small area, are still richer. Many years ago, Professor Asa Gray wrote that in the Japan-Manchurian region he found 168 trees divided among sixty-six genera, and in Eastern America 155 trees in sixty-six genera, the enumeration in both cases being confined "to timber trees or such as attain in the most favourable localities to a size which gives them a clear title to the arboreal rank." Since Professor Gray published the results of his investigations it has been proved that of the trees enumerated a number are not indigenous to Japan, but were brought there long ago from China and Korea, like most of the plants cultivated by the Japanese. "The proportion," says the author in his introduction to the book, "of trees to the whole flora of Japan is remarkable, being about 1 to 10-14, the number of indigenous flowering plants and vascular cryptogams being not far from 2500 species. Still more remarkable is the large proportion of woody plants to the whole flora. In Japan proper there are certainly not less than 325 species of shrubs, or 550 woody plants in all, or one woody plant in every 4-55 of the whole flora—a much larger percentage than occurs in any part of North America." Remoteness, bad roads, and the impossibility of bringing down their timber to the valleys have saved the mountain forests of Japan, which may still be seen, especially between 5000 feet and 8000 feet above the sea level, in their natural condition. These elevated forests are, however, composed of comparatively few species. On the mountain slopes 5000 feet above the sea the Hemlock forms continuous and almost unbroken forests of great extent. An almost impenetrable mass of dwarf Bamboos of several species forms the undergrowth of these forests even high on the mountains and in the north. To this abundance of the Bamboo, making impossible the growth of all except the most vigorous species of under shrubs, the author attributes the climbing habits in many Japanese plants, "which are obliged to ascend the trees in search of sun and light, for the Japanese forest is filled with climbing shrubs, which

\* "The Forest Flora of Japan." By Charles Sprague Sargent, Director of the Arnold Arboretum, of Harvard University. Houghton, Mifflin & Co., Boston and New York.

flourish into tropical luxuriance." The book contains chapters on the Magnolias, the Ternstroemias, Linden and Rues, Holly, Euonymus and Buckthorns, Maples, Sumachs and Pers, the Roses, Witch-Hazel and Aralia, Cornels, Honeysuckles and Persimmons, the Styrax, the arborescent members of the Heath family, the Ashes and their allies, the Laurel, Euphorbia and Nettles, Walnuts, Birches, Alders and Hornbeams, Oaks, Chestnuts, Willows and Poplars, the conifers, and also a chapter on the "economic aspects of the Japanese forests."

As regards the outward appearance of the book, we regret to say that, although from the outside an artistic book, the use of the commonest forms of mechanical processes in the illustrations in lieu of engravings has given the book a very commonplace look unworthy of its author or of the subject. This hard style of reproducing destroys all the value and tone of the cuts and all the charm of distance. The same remark applies to the illustrations of plants, which are not shown in light and shade, but are merely diagrams. Even where the engraving is good the drawing is devoid of light and shade. The book is printed on heavy clay paper instead of the delightful old paper which such books were printed on before the present clay paper. Still we should be grateful for this work of Mr. Sargent, who, by his knowledge and love of the work, is so well fitted for it.

## NOTES OF THE WEEK.

**Great quinquennial bulb show at Haarlem.**—The fifth great quinquennial bulb show will be held by the Royal Bulb Society of Haarlem from March 22 to 26. The competition is open for members of the society only. Most of the leading firms of the famous bulb district will be among the exhibitors.

**Strobilanthes Dyerianus.**—This plant is attractive for winter decoration both in and out of flower, its bright hues of peacock-blue and green foliage being always pleasing. Combined with this it is very free flowering, the flowers being of a darkish blue. It grows very freely and is of easy propagation, and is, I hear, a good bedding plant in America.—W. A. Cook, *Compton Bassett*.

**Orchids from Abergavenny.**—I am sending a few Orchids, comprising *Angraecum Humbloti*, the plant of which has two spikes with two flowers on each, one of which I am sending you; *Cypripedium Chamberlainianum*, a good form of *Dendrobium nobile*, *D. candidissimum*, and *Odontoglossum Roezli album*.—G. C. WILLIAMS, *Trajan House Gardens, Pandy*.

\* \* A nice gathering of flowers. The *Cypripedium* represented an especially good form of the beautiful *A. Chamberlainianum*. The forms of *Dendrobium nobile* were excellent.—Ed.

**Bouvardia Priory Beauty.**—This is, I think, one of the most effective of all the varieties of Bouvardias. It is very handsome and much admired, and with us very popular. Its habit is dwarf and erect, very free flowering, and lasts a long time in flower—longer than any other that I am acquainted with. Cuttings should be struck at once and the plants grown on without check, when well grown plants will commence to flower in October and continue till February.—W. A. Cook, *Compton Bassett, Calne*.

**Salvia pulchella.**—This slender growing, evergreen, pretty shrub is generally described as a greenhouse plant, but it is much more hardy than is generally supposed, as it will stand from 10° to 15° of frost with impunity. It has been growing here for several years trained on a wall with south-east aspect. Last year it made growths 9 feet long and produced its scarlet flowers for five or six months, or until the flower-buds were destroyed by frost. It is easily increased by suckers, which spring up thickly around the base of the plant. A good sandy loam with leaf soil or

peat suits it well. It cannot be too highly recommended for covering walls in warm situations.—W. O., *Fota*.

**Phajus grandifolius.**—This fine old Orchid is excellent for decorations. We recently noticed a nice lot of plants in bloom at Syon House. The value of this Orchid is its long lasting and its freedom of flowering in small pots. In a damp house the flowers soon spot, but if removed to a cool, dry position remain good for weeks. We know of no Orchid better adapted for rooms. We have had plants four or five weeks in a living room, and such plants flower every year. To get it in condition for this purpose feed from the surface in preference to overpotting.

**The frost and shrubs and plants.**—No doubt the editor will shortly be inundated with tales of disaster resulting from the late severe weather. To all who intend writing such lists I earnestly say do not, but, on the contrary, let us have and from all quarters the fullest possible lists of those things which have not been injured. Should we have a series of killing winters, all the beautiful shrubs and trees which are able to bear with impunity the lowest temperatures we are ever likely to have would get a chance in our gardens. Let us try and find out what these are.—T. SMITH.

**Actus gracillima.**—This is a delightful plant and very graceful. It is at Syon House, Brentford, in a very cool house, with such things as require little heat, and the plants are in rather small pots, the growths being covered with the yellow and crimson Pea-shaped flowers. The flowers are very small, but there are few plants which bloom more freely and are more readily grown. If kept well cut back after flowering, a bushy growth is encouraged, otherwise it is inclined to become naked at the base. The plant does not like overpotting, and good specimens may be grown in small pots. Cuttings of the half-ripened wood strike freely in May under a bell-glass in sandy compost, and the young plants do well grown in cold frames through the summer.

**Persian Cyclamens at Syon House.**—During the past two months these have been remarkably fine here, a light greenhouse being devoted to them. Mr. Wythes relies chiefly upon young plants, as he obtains finer blooms. I notice that the majority are in  $\frac{1}{2}$ -inch pots, and the varieties with white flowers are delightful. The culture of Cyclamens is simple, the plants being grown in large batches for winter bloom. The seed is sown as soon as ripe, so that the plants when they begin to flower are about fifteen months old. They are grown in frames all the summer on a hard coal-ash bottom, and removed into flowering quarters in November. The seedlings are kept on the move from the start. They are not dried off, and the same remarks apply to older plants, as these never lose all their old leaves when resting.—VISITOR.

**Mossy lawns (E. W. B.).**—One cause of the bad condition of the lawn is undoubtedly bad drainage. If the soil is light loam or chalk, the soil being very wet in winter and much burnt up in hot, dry weather, the remedy is not merely drainage, but food in the spring to enable the Grass to get more roothold and resist drought. If the land is wet, take up the turf and lay drains at about 9 feet apart, 1 foot deep, and use 3-inch drain pipes. Give a fall to the lowest portion of the lawn if possible. Make a good basin 3 feet to 4 feet deep at the lowest end. Fill in with rough brick rubble. This will take away the surface water, and it is well to also cover the drain tiles with rubble, clinkers, or rough ashes. Before replacing the soil, allow 3 inches to 6 inches of soil over the rubble for the turf to rest on. If you do not drain, you must give new surface soil. Rake away any Moss as deep as possible with an iron long-toothed rake, and give a surface-dressing of new loam and manure. Make firm and sow seed at once, covering the latter with fine soil. The quickest way is to re-turf, but before so doing the soil must be well drained. Wood ashes or burnt garden refuse of any kind mixed

with bone-meal is the best fertiliser for Grass land, as the ashes kill the Moss and the bone-meal encourages rapid growth. This is much better than applying lime to a chalky soil. I have renovated such land as yours by raking away the Moss, sowing a fine mixture of Grass and Clover, and using the above soil freely. It is also well to dress such land every season early in the year to promote a close growth.—G. W. S.

## OBITUARY.

### MR. THOMAS BAINES.

We regret to announce the death of Mr. Thomas Baines, which took place last Saturday at Palmer's Green from influenza and pneumonia. Among the best gardeners few, if any, were better known than Thomas Baines, who first distinguished himself as a plant grower, perhaps the best grower of our time. Afterwards he became an author and also designer of gardens. So far as we can judge in our own time, there never was a better plant grower than Thomas Baines, as tested both by the northern shows and those about London. There are people who think that to write is characteristic of the non-practical man, but such an opinion was not justified by the case of Thomas Baines, because he was a voluminous writer for the garden press and wrote an excellent book on stove and greenhouse plants, which is indeed the standard work on a subject he knew so well. He was extensively engaged in laying out gardens, and amongst other large places which he planned, or greatly altered, were Glansvern, Montgomeryshire; Cloughton-on-Brock, near Preston; Waddesden, Chacombe, Banbury, Broxbournebury, Boxley and Munden Park, Herts; besides many minor places. Mr. Thomas Baines was a Lancashire man, his people having been stewards and gardeners among the old estates there for many generations. He was seventy-two years of age, and was buried on Thursday last in the Great Northern Cemetery, Old Southgate.

**Mr. Joseph Lakin.**—We regret to hear of the death of this well-known authority upon florists' flowers, especially Tulips. His death took place at Temple Cowley, near Oxford, on Monday last at the age of sixty-seven.

**The late Alderman Sir Francis Wyatt Truscott.**—The death of this prominent citizen of London severs another tie, so to say, binding the International Horticultural Exhibition of 1886 with the present day. The Corporation of the City of London, when granting the use of the Guildhall for the purposes of the banquet to the more eminent foreign visitors invited to take part in the exhibition and botanical congress in connection with it, appointed six of its members to assist in the arrangements of the banquet, viz., Mr. Deputy Charles Reed, afterwards Sir Charles Reed, Mr. Deputy Obbard, and Messrs. J. E. Saunders, J. Kelday, F. Wyatt Truscott, and W. Lawley. Of these six, I think only Mr. W. Lawley survives. Sir F. W. Truscott was a particularly active helper, and materially assisted in making the banquet a success, which was presided over by the late Alderman Sir B. Phillips, then Lord Mayor of London.—R. DEAN.

**Mr. R. B. Laird.**—We regret to hear that the death occurred on Monday, from heart disease, of Mr. R. B. Laird, senior partner of the firm of Messrs. R. B. Laird and Sons, nurserymen, Edinburgh, and W. P. Laird and Sinclair, Dundee. He was born at Balgone, North Berwick, in 1823, and went at an early age to Dundee, and worked under his elder brother, the late Mr. W. P. Laird. He came to Edinburgh in 1843, and was about five years in the establishment of Messrs. Dickson

and Co. In 1848, with the late Mr. John Downie, he founded the business in Frederick Street, and lately at West Coates, which was well known for many years as Downie and Laird. At the dissolution of this partnership the firm was carried on under another designation by himself and his sons, and latterly he had been for the most part resident in Dundee, where another branch was established. Mr. Laird was widely known, and was one of the remaining links between the past and present generation of horticulturists. By many gardeners, old and young, he will not soon be forgotten. He was always ready to lend a helping hand to those in need of assistance, and he spent much time in doing what he could to further the interests of young gardeners, and to get them a start in life.

We are informed that Mr. William Serymgeour, of Shrubland Park, near Ipswich, forester to Lord de Saumarez, and late forester to Sir Herbert Maxwell, M.P., Monreith, Wigtonshire, N.B., has been appointed a government forester in the Forest of Dean, and will commence his duties there in the beginning of March.

**The weather in West Herts.**—A cold week and the sixth in succession. It had in it, however, one mild day, March 1, this being the first day since January 21, when the weather has been the least unseasonably warm. In fact, since the beginning of the year there have been as yet only nine days when the mean temperature has been above the average for the season. The ground is still very cold and in shaded places remains frost-bound. In an open spot fully exposed to the sun where my underground thermometers are situated the temperature at 2 feet and at 1 foot deep is the same, and now stands  $2\frac{1}{2}$  above the freezing point. During the twenty-six days ending the 3rd inst., the soil in the same open spot at 1 foot deep remained at or below freezing. A little snow fell on the first four days of the month, and on the 2nd and 3rd sufficient was deposited to completely cover the ground.—E. M., *Berkhamsted*.

**Isle of Thanet Chrysanthemum Society.**—The annual show of the above society will take place at the Hall by the Sea, Margate, on November 13 and 14.

**United Horticultural and Benefit Society.**—The annual meeting of this society will take place at the Caledonian Hotel, Adelphi Terrace, Strand, on Monday, March 11, at 8 p.m. Mr. Geo. Gordon will preside.

**Royal Horticultural Society.**—The next meeting of the R.H.S. will be held on Tuesday, March 12, in the Drill Hall, James Street, Westminster. Special prizes are offered for Daffodils, and at 3 p.m. a paper by Mr. Collette, of Guernsey, on the "Diseases of Potatoes," will be read.

**Gardeners' Royal Benevolent Institution.**—The Duke of Fife, K.T., P.C., has kindly consented to preside at the fifty-sixth annual festival dinner in aid of the funds of the Gardeners' Royal Benevolent Institution at the Hôtel Métropole on June 23 next.

*Garden Sketches.*—Mrs. Kingsley, South of Ireland

**Names of plants.**—G. Sharratt.—The bloom sent is a small, but nicely coloured form of *O. tripudians*, and though a useful free-flowering kind, is certainly not superior to *O. triumphans*, which compares favourably with any of the yellow-flowered section of the genus. *O. tripudians* is a native of New Grenada, and is found at a great elevation, so that it thrives well under the coolest treatment.—*Inquirer*.—*Crassula lactea*. Cuttings strike root freely in greenhouse in light soil.—J. Russell.—1, *Salvia coccinea*; 2, *Jasminum gracillimum*; 3, *Pelargonium Pretty Polly*; 4, *Echeveria retusa*.

**The Wild Garden:** or, the Naturalisation and Natural Grouping of Hardy Exotic Plants, with a chapter on the Garden of British Wild Flowers. Fourth edition, with wood engravings from drawings by Alfred Parsons, revised and enlarged. Demy 8vo, linen cloth. Price 12s.; well bound in half morocco, 18s. Through all booksellers.

No. 1217. SATURDAY, March 16, 1895. Vol. XLVII.

"This is an Art  
Which does mend Nature: change it rather; but  
THE ART ITSELF IS NATURE."—Shakespeare.

## ORCHIDS.

## NOTES ON CATTLEYAS.

IN such an important and widely distributed genus as *Cattleya* it is not surprising that varying modes of treatment, as regards temperature and other details, are necessary to their successful culture. The season for repotting many kinds being at hand affords growers an opportunity of noticing what progress the roots have made, and whether the compost provided for them is suitable or the reverse. It is unfortunately often found that these have been seeking the outside of the pot, while in the compost there is hardly a root deeper than an inch below the surface. In such a case it is clear that the rooting medium has been too close and heavy, possibly in too great bulk, and lacking hard, incompressible substances for the roots to cling to and for aerating the compost. The use of sand in the potting material has also much to answer for with regard to this state of affairs, and whenever I have had occasion to repot Orchids of this class where this material has been used, I have invariably found the roots more or less decayed owing to it. Strong-growing and rooting species, as *C. Mossie* and *C. Trianae*, may force a few roots into a compost of this description, but if long subjected to such treatment the health of the plants would certainly be impaired, while *C. Walkeriana*, *C. dolosa*, or even *C. aurea*, on the other hand, would never root in it at all. These weaker-growing *Cattleyas* like a small shallow pan or basket, with rough, open material about their roots, and if room can be found for them near the glass, they will thrive much better than if arranged upon the stages. It may, in fact, be taken as an axiom that the larger growing a plant is, the larger receptacle, comparatively, will be required for its roots, and *vice versa*. The time for repotting depends a good deal upon the species. Most of the late summer and autumn-flowering *Cattleyas* of the *labiata*, *Dowiana*, and *Gaskelliana* types, also *C. bicolor*, *C. guttata*, and others of that section, may be potted when commencing to grow in the spring. *C. Mossie*, *C. Trianae*, *C. Warneri*, and *C. Mendeli* should have attention as they go out of flower. It is in many cases best to anticipate if possible the annual emission of roots from the newly-formed pseudo-bulbs, as this at once establishes the plants in their new pots. I have not unfrequently left *C. Warneri* until quite late in August before repotting, and the plants have at once obtained a good hold on the compost by the roots from the pseudo-bulbs that had flowered in July. *C. labiata autumnalis* does not usually produce roots from its pseudo-bulbs until after these have flowered and are commencing to grow again, and this should be the time chosen for repotting. Thus instances might be multiplied, but the principle is the same in all. Amateurs should, therefore, be on the watch and find out for themselves the proper time for their cultural operations, performing these not in a mechanical manner, but as a means to an end, and keeping this end constantly in view. This applies not only to potting, but also to heating or watering—in short, to all the various details of culture. No one acquainted with the habits of *Cattleyas* would think of exciting them, for instance, dur-

ing winter, as it is well known that growth produced under the conditions which obtain at this season has none of the robust character so necessary to free-flowering. *C. Mossie* is often late in making its growth, and should, in order to ripen this, have a light and warm position after flowering before the sun loses its power in autumn. *C. superba* and *C. Dowiana*, too, delight in this extra heat, but as they flower upon the current year's growth, this is required earlier—in fact all through the season, only being careful not to excite them after flowering for the reasons above mentioned. That gem among spring-flowering *Cattleyas*, *C. Lawrenceana*, coming as it does from British Guiana, naturally requires a good deal of heat and a light, sunny position not too far removed from the roof glass. Enough has been mentioned to show the point intended, and if cultivators note and provide for the peculiarities of their plants, they will find that with their success the interest in their collections will in a like manner increase. H. R.

***Cœlogyre cristata alba*.**—This is no doubt one of the finest white Orchids we have. The flowers are of the purest white, without the faintest tint of any colour whatever. Flowers are to hand from W. McDonald, and also "J. C.," which certainly show the results of good culture by the size of the individual blooms and the number on the spike. This fine plant, although at one time exceedingly rare, has during the past few years become more plentiful.—G.

***Oncidium Cavendishianum*.**—This fine *Oncidium* belongs to a group which is distinguished by being without pseudo-bulbs and having large, thick and leathery foliage. In this group are included such species as *O. Lanceanum*, *O. luridum*, &c., the leaves of these kinds being much larger and thicker than others of this genus having bulbs to support them. *O. Cavendishianum* was first discovered by Mr. Ure-Skinner in Guatemala, and it has since been imported from Mexico. It is now more than fifty years ago since it was first seen in this country. The flowers appear usually from April to May, but a fine specimen is now in bloom at the Exotic Nurseries, Cheltenham. The spike, which grows erect, often attains 3 feet in length, and carries a many-flowered panicle. The flowers individually measure about 1½ inches in diameter, the sepals and petals greenish yellow, heavily spotted with red, the latter being nicely undulated; the lip is very prominent, three-lobed, side lobes spreading, and, like the front one, of a bright clear yellow. It is a very beautiful and easily managed species, and the flowers are sweetly scented.—G.

***Epidendrum O'Brienianum*.**—What a splendid plant this is for growing where cut flowers are in demand, for when it gets thoroughly established it will continue producing its long flower-spikes throughout the whole year. At the Exotic Nurseries, Cheltenham, this fine hybrid is especially well grown. It is also astonishing the length of time the individual spikes will continue in perfection, for as fast as the lower blossoms fade, fresh flowers appear at the top. It is the finest of all the Reed-like *Epidendrums*, and the first hybrid in this genus combining the brilliant scarlet-carmine of one parent with the deeper purple of the other.—G.

***Odontoplossum luteo-purpureum*.**—A fine specimen of this grand *Odontoglot* is now in flower at Mr. Cypher's nurseries at Cheltenham. It bears a spike of sixteen blooms. These individually measure over 4 inches in diameter and are exceedingly showy. The sepals and petals are nearly equal, oblong and lanceolate, the latter being more wavy and undulated, of a bright yellow, blotched and marked with rich brown; the petals are almost entirely bright chestnut-brown, tipped yellow, and with a narrow line of the same colour running across each. The lip in this plant is very conspicuous and contrasts well with the other

dark segments; this is of a clear yellow with a large chestnut reddish blotch immediately in front of the crest, which is composed of many teeth-like processes, all pointing forward. This fine species is one of the most beautiful kinds in the whole genus, and was discovered in New Grenada growing in the forests on the mountains at about 8000 feet or more elevation, which indicates that quite cool treatment under cultivation is necessary. In growth and habit the plant much resembles the popular *O. erispum*, but is larger in every respect. It will succeed well when grown with *O. erispum* and always flowers freely. There are many varieties of this plant, all of which are decidedly beautiful and easily recognised as belonging to this fine type.—W.

***Sophrontia grandiflora*.**—During the present season I have been pleased to see how well this brightly-coloured little epiphyte has been flowering, especially around the neighbourhood of London, but although in these localities the plants are kept in excellent condition and induced to bloom freely, it is not possible to produce such fine blooms as are seen on plants that are cultivated in a country atmosphere. I am in receipt of several flowers from various correspondents in different places, all of which show finer colour than those grown nearer town. The finest form I have comes from Mr. J. Cypher, the flowers being of large size and good shape, the shade of rich orange-vermilion being brighter than I have seen on any previous occasion. This little plant is without doubt a grand Orchid, especially for amateurs, as it occupies but little space and succeeds well with quite cool culture.—W.

## COMPARETTIAS.

ALTHOUGH it is early in the season for these plants to be in bloom, I was agreeably surprised to receive flowers of *C. falcata* from a friend who is a beginner in Orchid culture, but who, judging from the spike sent, is in a fair way to success, as the plant, purchased at a sale of an old collection in the neighbourhood, was not in the best of condition when it came into his hands. The members of this genus have long been in cultivation, but have not made great headway, either from lack of interest or because growers, as a rule, have not been successful with them. The cause of this non-success, I think, in the atmosphere provided for them, and not because of any inherent weakness in the plants. As I have before stated in these pages, small-growing Orchids of many kinds will not thrive in a house where the temperature is always fluctuating and heat and moisture are not effectively balanced. These plants will be most satisfactory in a house such as suits the New Grenadan *Odontoglots* as *O. grande*, and they undoubtedly like a moisture-laden atmosphere all through the season as far as practicable. They may be grown on blocks with Sphagnum Moss, provided due attention is given to watering the roots and sprinkling the foliage while in growth, but they are perhaps safer in the shallow pans that are so freely used for dwarf Orchids. These must, however, be only of sufficient size to allow of a very narrow margin round the plants, and must be filled nearly to the brim with drainage material, a thin surfacing of Sphagnum Moss being all that is required in the way of compost. The species named below are natives of the mountainous parts of Central and South America.

*C. COCCINEA* is an extremely bright and effective Orchid, flowering on the young or current growth; the racemes bear four or five bright scarlet and yellow flowers. The sepals are small and narrow, the lip broad and spreading. It flowers from September till November.

*C. FALCATA* is a similar species to the last named, but a better grower, and produces larger flower-spikes. The flowers have a purple tinge

which is very attractive. I have seen this plant growing well in a shallow wooden basket suspended from the roof with the cool section of *Odontoglossum* where the winter temperature never fell below 45°.

*C. macrolepton* is a native of New Grenada, and much more recently introduced than the preceding. The flowers are shaded magenta, with deeper spots. It grows freely, and generally flowers more freely than the other kinds named. Other older kinds are *C. rosea*, *C. speciosa*, and *C. saccata*. H. R.

**Ceologyne Massangeana** (*George Hemmings*)

—This lovely species will produce its spikes at all seasons of the year, and when once they commence they are developed with great rapidity. It is very free growing and a prolific bloomer, and one that requires but little attention to grow it successfully. Place the plant in a well-drained basket or pot and use fibrous peat and Sphagnum Moss. The plant should be suspended near the roof, in order that it may have the benefit of plenty of light, and the long, pendulous spikes will then be seen to the best advantage. The sepals and petals are buff-yellow, the lip very fleshy, dark brown, prettily lined and marked with light yellow. It has been known for a number of years and is supposed to be a native of Assam.—G.

**Masdevallia Veitchiana grandiflora**.

—This fine species of *Masdevallia* has a flower of remarkable and lovely colour. A fine flower of the true variety of the *grandiflora* form comes from Mr. James Cypher, of Cheltenham. This is of fine size and substance, the upper sepal being entirely covered with rich crimson papillae, as is also the larger portion of the lower sepals. When looking at the bloom sideways it is of a bluish shade, intermixed with orange-scarlet and a colour which is indeed very difficult for an artist to reproduce. The original *M. Veitchiana* was discovered on the Andes, of Peru, at some 11,000 feet or 12,000 feet elevation nearly thirty years ago. This, however, has smaller flowers and is less brilliant in colour than the variety above referred to.—H.

**Cymbidium Lowianum**.—Several flowers of this useful Orchid are to hand, some being very much better than others. Those from J. Edwards are very green and the blotch on the lip is of a very light shade; this cannot be called a good variety. The finest I have seen this year is that from "G. R.," which has sepals and petals of a fine yellow, the blotch on the lip of a very rich reddish crimson, distinctly bordered with yellow. I am not aware of the greatest number of flowers that have appeared upon a spike, but last season one came from Mr. Letts, of Aske Hall, which had either twenty-seven or twenty-nine finely-formed blooms.—W.

**Cypripedium Godseffianum**.—I recently noticed a fine and highly coloured form of this beautiful hybrid, which is no doubt one of the most beautiful crosses effected with *C. hirsutissimum*, the other parent being *C. Boxalli*. This was raised by Mr. Norman C. Cookson, of Wylam-on-Tyne, and flowered for the first time about six or seven years ago. The dorsal sepal is pale yellow, spotted with small dark brown spots; the petals are nicely undulated and light yellow at the base, becoming quite a pale blue on the apical half, and densely spotted with blackish dots; the lip is of good shape and of a pale brownish yellow.—W. H. G.

**Odontoglossum nebulosum**.—*Odontoglossum nebulosum* is an old inhabitant of our gardens, and a very useful species for growing in the cool house, its large flowers being very acceptable about April and May, which is its usual time of blooming. At the present time it should prove even more valuable, but it is not to be expected that the plant will continue to flower so early in the season. The bloom sent by W. Turner appears to be of a very good variety, with the spots of a nice red-brown, but it is a pity that a little more care is not taken when packing cut flowers,

so that they will arrive at their destination in a fresh condition. This plant is a native of Mexico, and by no means a new kind, as suggested, it having been imported into this country about sixty years ago. The cultivation of cool-growing Orchids was not then understood, and consequently such kinds as this and many others failed to grow well. Thus some of the best kinds were not again introduced for many years later. This species varies considerably in its flowers, some being larger and some more heavily spotted than others. In the variety *O. nebulosum can didissimum* the spotting is almost absent, whilst some range down to dark brownish red. Do not allow the plant to become weakened by leaving the flowers on too long.—W.

## ORCHARD AND FRUIT GARDEN.

### PRUNING FILBERTS.

In many gardens both Cob Nuts and Filberts are the most neglected of all fruit-bearing trees, seldom getting properly pruned, manured, or otherwise attended to. This may arise from a variety of causes, such as being in out-of-the-way situations, and therefore possibly forgotten in the press of work that must be done in the houses and kitchen garden, March and April being always a busy time, and which is the right season for pruning the trees. All experienced Nut growers that I have known never prune until after the flowering period, their contention being that it is desirable to have as many catkins as possible, so that plenty of pollen may be obtained to set the female flowers. That their theory is correct must be palpable to all, for if the pruning were done early many of the male blossoms would of necessity be cut away, and there would be a danger of an insufficiency of pollen to secure a good set or crop. In my own case this year most of the catkins were more or less developed before the severe frost set in, and I am afraid they will be of no value for fertilising. Fortunately, the common Hazel in the hedgerows is not so forward, and branches may be cut from the trees with plenty of catkins thereon and placed in the Filbert and Cob Nut trees when the female flowers expand, thus aiding Nature to perfect the functions of the trees.

Those who attended the conference held in connection with the great fruit show at the Crystal Palace will remember the advice given by Mr. Wise in his excellent paper on the pruning of Nuts, in which he stated that the centre of the bushes or trees should be cut out, leaving the main outside branches to grow on unchecked for two or three years, and then bending them outwards and securing them to stakes, which gives a large and prolific bush in a few years from time of planting. The trees that I saw at Lord Sudeley's immense fruit plantation at Toddington trained on that system were models of what such trees should be, and by the plan of bringing down the main branches in the manner described it appeared to act as a check on any grossness of habit, and induced the formation of plenty of small wood adapted to produce heavy crops of Nuts. No graver mistake in Nut culture could be made than to cut away the major portion of the fine twiggy wood, leaving all the strong shoots, as it is the thin wood that really bears the crop, but if late summer pruning is done no strong shoots will be present in spring, as they will be either entirely removed or shortened back, according to the judgment of the grower. At the same time while plenty of thin wood is desirable, care should be exercised that it does not become too congested or too thick in the middle of the tree, thereby impeding light and air and also acting as a harbour for insect foes. All suckers ought to be removed as they appear unless required for increasing the stock; when allowed to grow they act as robbers to the trees and do more or less injury to them. Immediately it is seen that a good crop of Nuts

is assured, a mulch of good manure will act splendidly, causing the foliage and fruit to attain a large and healthy size, and assisting the trees to form fruit-buds for another year. No trees pay better, if so well, for liberal treatment as Nuts, and yet few if any trees receive so little aid in that respect in many places. Even the common Hazel appreciates a dressing of manure, being almost unrecognisable after such an application, the Nuts acquiring a much improved appearance, also being produced in very large clusters.

W. G. C.

**Bullfinches and fruit buds**.—I hear on all sides lamentable accounts of the great damage done to fruit trees—particularly Plums and Gooseberries—by bullfinches and other birds, but chiefly the former. It is all very well to advise people to protect the feathered tribe, but if these sentimental people suffered a serious loss in their pockets year after year they would alter their opinions and say with me, "Kill every bullfinch you possibly can."—W. G. C.

**Grape Mrs. Pince**.—Mr. A. Young recently referred to this late Grape and notified that it did well with him. It may interest him to learn that it does well at several places in East Anglia. At Blickling two years ago I saw some magnificent bunches in September; they were of good size and well-shouldered, the berries being of extra size and beautifully coloured. On questioning Mr. Ocle, the gardener, as to the cause of its superiority, he remarked that when the border was made a large percentage of lime refuse was incorporated with the soil, and that he really thought this was the secret. This is a grand Grape when well done, but when only indifferently coloured, as it is in the majority of cases, it soon shrivels. It used to do wonderfully well at Cromer Hall some years ago, and I believe the soil in that locality is of a limy nature. Overcropping is not the only cause of bad colour in Mrs. Pince, as I have known cases where only a few bunches were allowed to remain on strong Vines, yet they were almost red. I think soil and situation have more to do with the success or otherwise of many Grapes than general management, and with Mrs. Pince in particular. Those capricious Grapes Duke of Buccleuch and Golden Champion do better at Hutton Hall than in many places, the treatment given to them by Mr. McIndoe being the same as that accorded to the majority of other sorts at Hutton. This leads me to think that the bracing air of the Cleveland Hills suits these two white Grapes, and prevents the appearance of the dreaded spot, which practically spoils these varieties. Mrs. Pince is a Grape well worth experimenting with in the shape of grafting and inarching, as there probably exists some variety which used as a stock would produce perfect bunches and berries of this highly-flavoured Grape.—J. CRAWFORD.

**Apple Barnack Beauty**.—I was much pleased to note a paragraph in a recent issue of THE GARDEN referring to the many merits of the above Apple and recommending it for more extensive planting. From the fact of seldom seeing it mentioned I was afraid it was an unsatisfactory variety generally, but the comments upon it by "G. C. R." coupled with the valuable testimony of such an able fruit grower as Mr. Woodward, of Barham Court, have dispelled the illusion. Having had the pleasure of visiting that astute gardener and fruit grower, Mr. Gilbert, Burghley, some twelve years ago, he spoke strongly in favour of Barnack Beauty (although never certificated, as he naively remarked). Ultimately he kindly sent me a plant of it to try, and although a light, thin stony soil is the reverse of an ideal one for Apples, yet this variety has made nice clean short-jointed wood, free from causer (the bane of Apple trees here), and bears annually heavy crops of well-coloured fruit of good eating and keeping qualities. It is a variety I should regret to be without. The knowledge that it thrives so remarkably well under good cultivation and in favoured situations is gratifying, and perhaps its value for general

planting is somewhat enhanced by its proving satisfactory under adverse circumstances such as ours.—GROWER.

#### APPLE PEASGOOD'S NONSUCH.

THIS is one of the best of the newer introductions and of good quality, useful either for cooking or for dessert. It is one of the best exhibition fruits. In appearance this fruit is somewhat like a good form of Blenheim Orange, less conical perhaps, but highly coloured when well grown. It does well in Kent, and I well remember the grand examples shown at the R.H.S. congress held at Chiswick in 1883 by Mr. Haycock, then in charge of Barham Court Gardens, Maidstone. This Apple being at that time less known was of great interest, and from that date appears to have been planted largely. The fruits shown weighed 1 lb. each and measured 13 inches to 15 in. in circumference. Those figured were grown at Sittingbourne, in Kent. I find this Apple

will command the best price; indeed, there is always a greater demand for such fruits than others. I am well aware we have any quantity of Apples fit for use at the time this comes in, but we have few approaching it in appearance. Most of the imported fruits sent to this country are sold because of their appearance, as a poor-looking, home-grown fruit will stand no chance against the brilliant foreign importations. I have seen this variety recommended as suitable for orchard culture as a standard, but as such I cannot advise its culture, as with me it does not fruit so freely as when grown on a dwarf stock as a bush. My experience may not be similar to that of others, but as a standard it will take some years before it bears, and in this way it much resembles the Blenheim. This latter is slow in

ing the foliage thin seems a new departure in the culture of this Grape, but one to be remembered and practised if success is to crown our efforts.—A. L., *Beaulieu*.

**Apple Mannington's Pearmain.**—I quite agree with the remarks of "H. C. P." on this Apple (p. 111) as to this being one of the finest late dessert Apples in cultivation, and one that should be extensively planted where quality and colour are valued. Lady Sudeley, so highly spoken of by "E. M.," is another excellent early dessert Apple, and is one of the best flavoured Apples grown in its season.—A. L., *Beaulieu*.

#### FLAVOUR IN FORCED STRAWBERRIES.

MANY complain that forced Strawberries are flavourless, insipid, and not at all profitable when their cost of production is considered. I do not intend to go into the question of cost, as it would take up too much space. Many things produced in a garden must not be looked upon as paying, whilst I know of several growers who force many thousands of Strawberries, and who would soon give up the work if carried on at a loss. Such large growers do not force at this season, as they get their plants to fruit at the end of April or for May, the latter month chiefly. There is a splendid demand for good fruits at that time, and they are sent to market little inferior to the best fruit from the open ground. By supplying the market at the time named the large grower can get well-flavoured fruits, as he does not force hard. Such fruits always sell well, and are never a drug in the market at the time named. Many growers still place chief reliance upon the well-known Sir Charles Napier. The fruit is not equal in flavour to British Queen, but I am sure it is superior to others I could name provided the plant receives the right treatment at the ripening period. In a short note about flavour I do not intend to enter into cultural details, my aim being to point out that flavour in these fruits is at times overlooked.

For years I have endeavoured to gain this good quality, though at times it cannot always be secured. Seasons, want of time, hard forcing, and other minor details prevent the plants receiving the necessary attention.

Good flavour cannot be got

in a steaming hothouse with a deficiency of air. Many good cultivators advise removal of the plants to a cooler and drier house, and excellent advice it is, but most gardeners are handicapped. Labour is none too plentiful and the fruit must be gathered from hothouses, flavour not being considered at the finish. On the other hand, large growers with nothing else in their houses get better flavoured fruit if they can lower the temperatures and thus finish their fruit, so as to get size and colour with firmness combined. Of late I have reserved a small lean-to house holding several hundreds of plants as a finishing house, and am much pleased with the results. The plants are placed here as soon as the fruits are partially coloured and will keep good a long time, when gathered being equal to the best fruits in the open as regards flavour.



*Apple Peasgood's Nonsuch. From a photograph sent by Mr. F. M. Ramell, High Street, Sittingbourne.*

does well on the French Doucin and Paradise when required to fruit in a small state. The fruits are of greenish-yellow colour, flushed and streaked with red, soft and of excellent quality. It is not a keeping variety, being at its best in October and November, in colour much resembling the well-known Cellini. This variety was recently exhibited by Mr. Payne from the Palace Gardens, Wells, Somerset, he staging the six largest fruits I have seen. They were grown on a south-east wall and gathered from a tree which had only been planted seven years, the fruits being thinned to sixty-two, and those exhibited weighed 2 lbs. each, none being under 1 lb. Some fruit growers may ask if these large fruits are worth special culture, to which I must say, yes. Fine fruits of any kind are always admired, and, as most growers well know,

coming into bearing as a standard till it attains a fair size and age. The fruit being so fine, when required for special purposes this Apple is worthy of a west wall, as in such a position when the fruit is thinned it is superb. It should be in all collections where good fruits are required.

G. WYTHES.

**Grape Mrs. Pince.**—I was very pleased to see Mr. Young's able remarks on p. 111 in response to "Wiltshire Gardener" on his treatment of this grand Grape, which I have no doubt will be read with interest by many of your readers. I quite agree with him that the most fertile cause of failure is overcropping, as with me it is very free in showing fruit and also sets well; consequently requires a firm hand to reduce the number of bunches. Mr. Young's treatment of keep-

The house faces north and the stages are slate slabs, with a little finely sifted gravel for the pots to rest upon. The advantage of such a house is that, no matter what time of day the fruits are gathered, they retain the luscious flavour so desirable, as the plants are not roasted as when finished on hot, drying shelves. I have noticed that the fruits of Sir C. Napier, Auguste Nicaise, Noble, and others not specially remarkable for flavour are all that can be desired, given cool treatment at the finish.

Many late forced fruits would be much better flavoured if forced slowly, and of late years I have discarded shelves for the latest lots—I mean shelves at the back of houses or make-shifts, not proper Strawberry houses, as on such shelves it is almost impossible to get the desired flavour in the fruits, the plants are subjected to great fluctuations of temperature, and are rarely moist or in a free-growing condition an hour after they are watered. To get flavour with late fruits, grow the plants on a cool coal-ash bottom, as the roots revel in such treatment, and there is less fear of that terrible pest red spider, which is one of the greatest evils growers have to contend with, and one that greatly affects the flavour of forced Strawberries. I have lifted the much-abused Noble when short of plants late in April and planted it in cold frames. Treated in this way the flavour of the fruit was greatly improved. Forced Strawberries when given a little more care at the finish should not be regarded as being worthless and bad flavoured. I consider them invaluable, and a fruit all growers, gardeners especially, should do their utmost to improve.

GEO. WYTHES.

## ROSE GARDEN.

### IN THE ROSE GARDEN.

WHAT a contrast between this and last year. Then we had a fine lot of growth that had come through the winter well, and our Roses were so precociously forward in breaking, that many of us had much fear of frost. As time went on we seemed fairly safe from this enemy to spring growth. But, alas, the foe was only waiting, and showed his teeth in an unmistakable manner early in June. Last season many were eager to prune by the end of February, and by the close of the following month our Roses were so forward, that we seemed altogether behind where the knife had not finished its work. We were favoured with good growth last autumn again, and until the middle of January it looked safe. But now our hopes are again shattered. Not much danger of precocious growth; indeed, many of us will be fortunate to have saved any serviceable wood upon our strong-growing and early-blooming Roses. Nor shall we have much doubt about pruning, for by the time the soil has got warm once more spring will be with us, and after the dead wood has been trimmed out we shall find a very scanty remainder. At first sight it is somewhat singular that those Roses in sheltered and south aspects should be much worse than those upon a northern wall that were continually frozen for so long a period, and also subjected to the full effects of the keen north-east winds. I do not think this would have been so noticeable had the weather not been so bright. It is quite certain that the sun thawed the wood in these spots for an hour or two during mid-day, and that within a very short period they were again severely frozen. Looking back, I call to mind more than one instance where the weather was severe for a brief period only, sometimes for one night

alone, and in these cases there seemed equal damage done whatever position the Roses occupied. In another case a plant of Marie van Houtte was incased in ice for weeks, and yet came out of the ordeal safely. A steady thaw set in and there was no repetition of the frost. In shaded spots the Roses appear fairly safe again this year, but those in the sun are a sad wreck. Does not this point to the conclusion that even a prolonged frost of severity is far less harmful than successive frost and thaw? With the soil, and consequently roots, frozen to so great a depth, while the tops of the Roses were being dried up both by frost and sun, and experiencing two such opposing elements in rapid succession, I am not greatly surprised that the Roses apparently better situated are evidently coming out of the ordeal in the least satisfactory manner.

As a stock the Brier in all forms has proved much hardier than the Manetti, and buds worked upon the former last summer are comparatively uninjured in the case of dwarfs. Much of this is doubtless owing to the partial covering of snow, although I regret to say we had next to none. On raised stems the Rose-buds look very bad and there will be many blanks again, but from a different cause to that of 1893-94. Then it was the Briers themselves which failed, now it is the Rose. Once more we see that Teas are quite as hardy as the Bourbons and Hybrid Perpetuals, if we do not perversely choose extreme examples from each class.

At first glance beds of maidens look quite cut up, and, being generally grown upon open quarters, they have certainly had a most trying time. On the whole, however, young plants have stood the weather better than older ones. The two Roses least affected are the forms of Rugosas and Hybrid Sweet Briers, while Messrs. W. Paul and Son's Moss Zenobia seems almost untouched. Would that I could write the same of others.

RIDGEWOOD.

### VITALITY OF YOUNG AND OLD PLANTS.

ALTHOUGH too early for one to know the extent of damage caused by this remarkable frost, I can see that the plants which will pull through best are those that are one year from the maiden bud and some grafted plants of last season. We look for more vitality in young plants after they have grown somewhat away from the very tenderest stages, and the fully exposed wood of almost the whole of my young ones still has a healthy look, and is without the dry and nut-brown pith too prevalent in those of older standing. When short of a stock of Teas or Noisettes I have many times worked them up by grafting early in the year and then planting outside in June or July. Such plants grow away freely, and are equal, often superior, to any maidens from the bud, while a year is saved. It is a batch of these that are the most promising of our plants at present, the wood seeming almost unaffected. Old plants—the same bed that stood the test of 1880-81 and subsequent hard winters looks as if it must succumb now. Older Hybrid Perpetuals, too, are looking bad, while a few worked similar to the Teas are comparatively untouched, notwithstanding they are the more delicate varieties such as Horace Vernet and new Roses whose numbers were short.

It is the same when cultivating in pots. We find a young plant from two to four years far more profitable to grow than after the wood has become old and sere. True, we can keep them young in a manner by removing this old wood as far as possible and retaining young growth. But to my mind the vitality and vigour of such plants cannot be compared to those of two to four years. The base is old and so are the roots. A few old plants of some variety much needed for

stock—Comtesse de Nadaillae, Souvenir d'Elise Vardon, and others—have been knocked out of pots and the whole of the soil washed away; then the roots trimmed and thinned out where coarse, and repotted into small pots of turfy and sandy soil so as to encourage new roots at once, potting on again into a richer compost. Healthy growth has generally followed such treatment. Other plants that seemed to have done their part as pot Roses have recovered when so treated, and planted out into a border as soon as the weather was warm enough to avoid severe checks. I have frequently noticed that wood grown under glass is more quickly affected than that which has been experiencing the many little checks and chills our outdoor Roses are subjected to at all times of the year.

**Rose Mme. Georges Brusnt.**—I am sorry the behaviour of the above hybrid Japanese Brier here does not justify me in confirming the high opinion expressed on its merits by "R." (page 83), but I must own that it has failed lamentably to come up to our expectations. The rugosa varieties are extensively grown here in large solid masses in prominent positions, which they worthily occupy, clothed as they are with ample healthy foliage of good colour, sheets of bloom and heavy crops of large attractive hews, which together make a nice show from early summer to late autumn. On the strength of its parentage and the high encomiums passed on it through the Press and other channels, a number of Mme. Georges Brusnt were quickly procured and planted alongside some of the rugosas, thus enlarging one of the clumps. From the outset they made strong satisfactory growth and bloomed freely; but, alas, each season they became so overrun with mildew as to become quite an eyesore, and even marred the appearance of the adjoining rugosas, so that after two seasons they have been removed and planted in a less conspicuous position in a wilder part of the grounds. This liability to mildew is unfortunate, for this variety is such a perpetual bloomer and the elongated buds are pretty and useful—a decided acquisition in this respect; but with this class and when grown in large masses one does not take kindly to be eternally applying insecticides, &c., in face of the fact that the superior rugosas take care of themselves, requiring neither lotions nor cosmetics.—J. R., *Merioneth*.

**Worthless new plants.**—In a recent issue of the new plant catalogue of a leading Continental nurseryman of the very highest character noted for the number of really good new plants, especially in the shrub line, which he has been the means of introducing into European gardens appeared the name of *Coriaria japonica*, about which (having raised it from seeds sent him from Japan without description) the nurseryman confessed he knew absolutely nothing, having been unable to find any notice or description of it in any botanical work to which he had access. All he could say about it was that the family was known in European gardens through *Coriaria myrtifolia*, and that its foliage resembled that of *Hypericum Moserianum*. On referring to that great and most authentic work of reference, "Index Kewensis," I found that this *Coriaria* was fully described by the late distinguished American botanist, Dr. Asa Gray in the "Memoirs of the American Academy," new series, vol. vi., for 1858-9, on p. 383. Not having these Memoirs myself, I sent the reference to a friend in the herbarium at Kew, asking him to be so kind as to let me know how *C. japonica* stood as to beauty and value as an ornamental plant in comparison with *C. sarmatosa*, figured on plate 2470 of the 51st volume of the *Botanical Magazine*, which appeared to be a herb with spikes of small and utterly inconspicuous greenish flowers of no value at all from a horticultural point of view, but said to be an extremely rare and botanically interesting plant from New Zealand. The answer received from Kew was that *Coriaria japonica* was considerably less



beautiful than the member of the family figured in the *Botanical Magazine*, and that I should not care for it at all. I think that it is much to be regretted from every point of view that new and unknown plants should be sent out by nurserymen before they have either proved them themselves and found them to be worth growing, or at all events received some reliable description of them from those who knew them in their native country and sent them the seed. The receipt of such plants when they turn out to be worthless must result in disappointment to the purchaser and discredit to the nurseryman.—BOSCOBEL.

## STOVE AND GREENHOUSE.

### LILY OF THE VALLEY IN A TUB.

THE Lily of the Valley crowns have been in the tub for about four years, but this is the first time there has been such a splendid show of blossom, fully one-half the crowns flowering. From the time they were placed in the tub they have not been disturbed and left out in the open. Just before winter sets in about 2 inches of thoroughly decomposed manure are put all



*Lily of the Valley in a tub. Engraved for THE GARDEN from a photograph sent by Mr. F. H. D. Kemplen, Wallberton Cottage, Dunedin, N.Z.*

over the soil, and this seems to have the effect of stimulating an early and vigorous growth. When the shoots are well up, tepid water is given every day, to which is added manure water twice a week when the spikes of blossom are well on. I have tried forcing this beautiful spring flower, but without success, and the attempts of our local nurserymen have also failed.

FRED. H. D. KEMPLER.

*Dunedin.*

**Ataccia cristata.**—This curious plant is seldom seen in collections, but the weird appearance of the plant when in flower attracts everybody, especially those who admire anything quaint in structure. I obtained a plant some eight or ten years ago after reading a note in THE GARDEN about it, and especially about the facility with which it might be propagated by detaching the gemmae from the rhizomes. I did not find that it could be multiplied so very readily, but the plants will throw out a growth or two from near the base of the rhizome; if these are removed with a portion of the rhizome and roots attached they will in time grow into flowering plants. The plant I have flowers every year, but not quite so strongly as I would like. The soil I use for potting is composed of good fibrous peat and sand with a little Sphagnum Moss. It is usually

potted with the Cattleyas; the only difference there is consists in the pots not having so much drainage material put in. The plant likes good drainage, but not more than 2 inches deep in pots  $8\frac{1}{2}$  inches or 9 inches in diameter. This is the largest size I have yet used for this plant. I find also that it succeeds best in the part of the house least exposed to the sun: the leaves become withered at the tips in a sunny position, and when this happens but little good results from it. I have just turned the plant out of its pot, and on examining the rhizome I find one feeble growth starting from its base; this with part of the rhizome and roots has been removed and planted by itself. The plant has been cut over and the part of the rhizome left has been potted also. The whole will be put into a hand-glass in the Cattleya house until growth commences.—J. DOUGLAS.

**The forcing Pinks.**—These are amongst the most esteemed of garden flowers for their sweetness and the delicate beauty of the petals combined with the pretty effect of their elegant leaves and growths. I have frequently in the pages of THE GARDEN written about the best way to obtain good specimens for forcing, and those who have followed my advice should now have a fine lot of plants. Pinks, Roses, and white Lilies are our favourite flowers for forcing, and they require very much the same treatment. They are

all liable to be attacked by the aphid tribe, which can be most readily destroyed by fumigation with a puff of flowers of sulphur on the first appearance of mildew on the Rose leaves. This is enough to keep them healthy and in good condition. I find the Pinks are impatient of too early forcing; they do not make good growths about the shortest days in the year. At that time the temperature should not be above  $50^{\circ}$  as a minimum, or even less in very severe weather. Now,  $55^{\circ}$  to  $60^{\circ}$  is the best temperature. The plants make good growths near the roof-glass of the forcing house, and a little weak liquid manure is useful to give a richer colour to the leaves and a more intense colour to the flowers, that is the coloured varieties, for it is well known to gardeners that forcing, especially in dull weather, has a tendency to produce a rather faded appearance in the flowers. This is one reason why I always insist upon plants that are being forced having as much air admitted as possible under the circumstances, and being placed where they can get a greater suffusion of light.—J. DOUGLAS.

**Anoiganthus breviflorus.**—This is one of the numerous Amaryllids that are found in South Africa, and, like most subjects from that region, it is essentially a greenhouse plant, in which structure, with a reasonable amount of attention, it can be depended upon to flower well. Blooming as it does in the first two months of the year it

is especially valuable, and though less showy than some other bulbous plants, yet it is very beautiful, as may be seen by referring to a coloured plate issued with THE GARDEN, July 18, 1891. It produces a solid, brownish bulb, ovoid in shape, from which are pushed out the leaves. They are rather stiff, nearly erect, about a foot long, and an inch in width. The flower-scape reaches a height of a foot or so, and is terminated by a loose umbel of blossoms. The individual flowers are nearly a couple of inches long, but so constricted at the base, that at the most they are not more than half expanded. It succeeds well in a mixture of two-thirds good yellow loam, with one-third leaf-mould, and a liberal amount of silver sand. When growing, water must be given pretty freely, but when at rest the soil should be kept dry, in order that the bulbs may be thoroughly ripened. In potting, the top of the bulbs should be just below the surface of the soil and the pots must be thoroughly drained, as, like many other bulbous plants, they will when in good condition stand for years without repotting. That this beautiful bulbous plant is not more often seen cannot be owing to its price, which in one of the Dutch lists lying before me is very moderate.—H. P.

### NOTES ON LILY CULTURE.

This is not the time to plant Lilies either for out of doors or for culture in pots, except, perhaps, late importations of *L. auratum*, but it is certain that it would have been better to have potted them up two months ago. Perhaps the best time to repot or replant Lilies is in September, at least for the varieties that flower early and ripen their stalks early, for in the case of Lilies as soon as the stems die down the bulbs may be transplanted or taken out of the ground to be repotted. Lily bulbs should never be allowed to dry, like the bulbs of Hyacinths, Tulips, and other things with hard solid bulbs. Where the bulbs have been potted and plunged deep in cocoa fibre refuse, it would be better to let them remain there while severe frosts last, but some straw or long stable manure should be thrown over them to keep intense frosts from penetrating too deeply. At one time I used to plunge them out of doors, but some varieties and some species would suffer from too much wet; for instance, *L. auratum* would do so, while *L. lanceifolium* and its varieties would not. The beautiful *L. tigrinum splendens* would also stand well out of doors. This beautiful Lily should be grown in every garden, and as a pot plant arranged in the greenhouse or conservatory few of the dainty exotics would equal it. The bulbs formed on the stems are all useful to produce plants; they should be taken off and potted when the others are done. My object in writing about Lilies at this time was not to give general details about their culture, but to warn growers of the fact that they must be attended to very carefully in the spring. Our plants have been plunged in frames, and are now pushing through the ground. These young growths are very susceptible to injury unless they are well managed. I take them up out of the plunging material and place them in a frame with the pots plunged to the rim, but with the growths quite free; in this position we seldom experience any frosts after the middle of February that are likely to injure them, and it is easy to throw a few mats over the glass if the cold is likely to be intense. The plants soon make strong, sturdy growth in these frames, and in fine weather the lights are drawn off, being replaced at night when there is danger from frosts. In May the plants may be quite in the open air, but they do best in a sheltered position, as high winds damage the leaves a good deal. Another way of treating Lilies grown in pots is to take them into the greenhouse and place them amongst other plants, but this is the way to get poor results. It is necessary to shade for the flowering plants, and the stems are drawn up weakly, the leaves poor, the flowers small in size, and petals thin. Greenhouse culture of all hardy plants is a mistake if they are intended to be flowered in the green-

house; they should be grown in frames or out of doors, and be taken into the greenhouse for flowering. If they are to be forced, they must be placed in a light forcing house near the glass roof. I force the *Lilium longiflorum*, the Bermuda type, and they are now fine sturdy plants showing bloom. They will be taken into the greenhouse as the flowers open, and with good management they will flower again in the autumn. I always get a spring and autumn bloom from the same bulbs of this fine Lily. J. DOUGLAS.

#### THYRSACANTHUS RUTILANS.

A WELL-FLOWERED plant of this member of the acanthaceous family was recently shown from Sir Trevor Lawrence's collection at Burford Lodge, Dorking. The plant itself was not a large one by any means, being to all appearance only a cutting of last year, in height not more than 18 inches, but it was flowering most profusely, its slender drooping racemes being clothed with blossoms, these racemes reaching below the pot. Its colour is an acquisition during the dull season of the year amongst stove plants, the example shown bearing evidence of its utility in a manner some might not think of, viz., as a plant for the dinner table. As decorative subjects, even when kept exclusively in the stove, when in flower plants of this *Thyrsacanthus* are a great boon. Many who have grown it have not developed its beauties to the greatest possible extent, this arising no doubt from a lack of knowledge as to its adaptability. Too often the plants are struck yearly, whereas it is best to grow on the plants and form them into standards of 3 feet or so in height. I have grown them myself to a height of 5 feet as standards; this height afforded the opportunity of inclining the heads forwards and partially over the pathway when in bloom, whereby a beautiful effect was produced. The quantity of flowers and the number of racemes on these taller and older plants are greatly in excess of what can be possibly had on the younger ones—all things being equal, *i.e.*, the cultivation in each case what it should be. Standards of this description will last for several years; thus propagation only need be done to keep up the desired quantity. When out of flower these older plants will do with a rest, being partially dried off and stood in an intermediate house. Growth should be started again from this cooler house when with the spring warmer weather sets in. In no case is it necessary to keep the plants in the stove to make their growth, even in the culture of young plants when once well established. During the summer a light, airy house will suit them well, the chief point to observe being the building up and solidifying of an enduring growth. In quite favoured localities I have grown *Thyrsacanthus rutilans* out-of-doors from June to September, thus saving room inside, the results being all that one could wish. The ordinary soil for stove plants (peat and loam) will suit it well. *T. Schomburgkianus* has darker flowers than *T. rutilans* and is often confused with it. JAS. HUDSON.

#### CANTUA DEPENDENS.

THOSE of us who can look back over a long gardening career sometimes regret that popular plants grown and greatly admired thirty or forty years ago are now seldom seen. One of the first plants I became acquainted with was this, and it was grown and flowered admirably in a small greenhouse. I well remember how proud I was when I was given charge of the small house which contained this and other plants as part of my duty. The plant had been recently introduced by the Messrs. Veitch, of Exeter, and it was grown in most of the leading gardens in the country, but not with uniform success. Many gardeners then, as now, did not consider that most plants require a season of rest and a time of growth, both being required to produce flowering growth. Another point is the importance of keeping the plants free from the attacks of red spider, a troublesome pest which saps the consti-

tution of any plant unless it is kept down. *Cantua dependens* is easy of culture, and with a most charming plant when in flower. Under ordinary greenhouse treatment it will bloom in April and May, and when a well-flowered specimen is produced laden with its fine tubular flowers about 4 inches in length, of a bright rosy red colour with an orange throat, hanging in clusters, one does not begrudge the small amount of labour to obtain such good results. The plants grow freely in good yellow loam, with some leaf-mould, decayed manure, and a little coarse white sand, not much, as I find the plant does not flower so freely if the compost is too open. The plants I had charge of flowered grandly in 10-inch and 11-inch flower-pots, but a young plant in a 4-inch or 5-inch pot must be potted into a 7-inch or 8-inch pot, and be allowed to fill that well with roots first, to be carefully repotted into the larger size before it gets what gardeners term pot-bound. Young plants can be propagated freely from cuttings of the nearly ripe wood inserted in sandy soil and covered with a bell-glass. The plants should be allowed to make their growth in a light, airy position. I believe hard-wooded plants are going out of cultivation, because they are spoiled by being grown in a shaded greenhouse and smothered with rapid-growing soft-wooded plants, at the same time being over-shaded owing to the necessity of taking care of the plants in bloom. When the flowering period is over the plants rest, and but little water is given them. Cut the young wood well back and let the plants start again about June. As soon as they have made a start turn them out of the pots, reduce the old balls, and repot the plants that were in 10-inch pots into 8½-inch pots. They will soon fill these with roots, and may be repotted again into 11-inch pots. When the plants have made a good start into that size place them in a sunny position out of doors, and they will soon ripen up their season's growth to produce flowering shoots for next year. J. DOUGLAS.

**Bottom-heat for Eucharis.**—Many while advocating bottom-heat for *Eucharis* when making growth are opposed to a continuation of it. When the bulk of the season's leaves has been made they lift the pots from the plunging bed, keep the plants much drier at the roots, and thus, as they think, prepare them for throwing up bloom when again returned to the bed. I do not like this system, having seen many plants succumb under it. One of the most successful growers of *Eucharis* constantly keeps his plants plunged in warm leaves. The beds are renewed in spring, the extra bottom-heat causing large numbers of flowers to appear. Growth starts simultaneously, and by the time this is completed the leaves have lost a deal of their former warmth, a condition suitable to the plants while at rest. Of course, while the roots are comparatively inactive much less water is required, but to withhold it entirely for a given time, as some do, is in my opinion very bad practice. I have a few plants in large pots standing on boards over hot-water pipes in a Pine stove. Here they have been for years, summer and winter. They grow freely and flower satisfactorily, thereby proving that a continual bottom-heat suits them.—J. C.

**Paullinia thalictrifolia.**—Introduced from Rio de Janeiro some twenty-four years ago, this beautiful climbing plant was for a time much grown (fine-foliaged subjects being then all the rage), but now-a-days, though a stock plant in some of the best nurseries, its merits do not seem to be recognised. To the lover of flowers alone there is nothing to commend it, as the beauty of this *Paullinia* depends upon its prettily divided Fern-like foliage. As a climber it may be grown in various ways, first as a rafter plant in the stove, or around a few sticks it may be so trained as to form a somewhat pyramidal-shaped specimen. I have seen it, too, on a fan-shaped trellis, which presented quite a mass of its elegantly divided foliage. In a suspended basket it is also very pretty. The shoots of this *Paullinia* are of a thin

wiry nature and clothed with triangular-shaped leaves, divided as in some of the *Thalictrium* (hence the specific name), and about 6 inches to 8 inches long. In some positions the young leaves acquire a slight bronzy tint, and are then additionally attractive. There is a variety (*argentea*) in which the leaves are suffused with a silvery grey, and very pretty it is. This *Paullinia* is not a difficult subject to cultivate, yet at the same time it needs a certain amount of care and attention. The roots are fine and delicate, and it succeeds best in a soil composed of two parts peat to one of loam and a very liberal sprinkling of silver sand. It is essentially a stove plant, needing as it does a brisk heat at all seasons. The flowers are said to be small, pale pink, and borne in little clusters.—H. P.

#### MYRSIPHYLLUM ASPARAGOIDES.

THE specimen sent by W. J. Luff is *Myrsiphyllum asparagoides*, a native of South Africa. It has been known in this country for nearly 200 years, but it was only to be found in few gardens till twenty years ago or less, when the long, slender sprays became very popular for table decoration, and it was then taken in hand by some of our growers for Covent Garden Market. The idea of employing the plant in this manner was, however, first brought here from America, where it was already largely grown under the name of *Smilax*, which is by some applied to it in this country, but it is really quite distinct from the genus *Smilax*, being in fact a near ally of the *Asparagus*, and, indeed, it is by some botanists included in that genus. The treatment required is simple. Being a native of the Cape of Good Hope, the protection of a greenhouse is, of course, necessary to its well-doing, and where grown in quantity, a warmth above that of a greenhouse is frequently maintained. It forms a mass of small tuber-like roots, from whence the slender shoots are pushed up. They are at first so delicate that a small slug will soon make havoc among a considerable number. When required to be used in a cut state each shoot should be trained separately to a piece of thin twine, as when wanted the entire shoot can be taken without any trouble; whereas if allowed to become entangled with each other it is a difficult matter to separate them. This *Myrsiphyllum*, too, makes a very pretty climbing plant for a rafter in the greenhouse, and in this way its bright green foliage is very attractive, added to which the small greenish white blossoms which are borne at this season of the year impart an additional feature. These flowers are supported on rather long, slender stalks, and a very elegant appearance they present when in quantity. They also emit a very pleasing perfume. The plant may be grown either in pots or planted out in a bed of soil prepared for its reception. A very suitable compost is two-thirds of loam to one of leaf-mould and a liberal amount of silver sand. In whatever position it is grown, thorough drainage is essential to its well-doing, as when growing freely it needs a liberal amount of water, but is at the same time very impatient of stagnant moisture. If trained around a few sticks, neat little specimens may be had in pots 5 inches or 6 inches in diameter, but it is when growing freely as a climber, and the shoots allowed to dispose themselves in a natural manner, that this *Myrsiphyllum* is seen at its best. It is very useful, too, for draping the front of a stage in the greenhouse, thus helping to take off the hard, formal appearance. Propagation is effected by division, which is readily carried out early in the year before growth recommences, while in the case of established plants seeds are often produced, and plants obtained in this way are by many preferred to divided specimens. Seeds of it can as a rule be obtained from most dealers of repute. They should be sown as soon as possible after receipt, using rather lighter compost than that recommended for established plants. The pots or pans should be well drained and filled to within an inch of the top with soil, then the seed may be sown

thereon and covered with about a quarter of an inch of the same soil sifted rather fine. A temperature somewhat above that of an ordinary greenhouse is best for them, and with the usual attention in the matter of watering the seedlings will soon grow, and when large enough must be potted singly into small pots. H. P.

#### SWEET-SCENTED RHODODENDRONS.

THAT class of Rhododendrons which has become so popular of late years, viz., the Javan or tubeflowered section, is not remarkable for fragrance, yet the blossoms of many kinds that require greenhouse treatment are deliciously scented. This group consists of a great many hybrid varieties, obtained by intercrossing various species that are natives of the Himalayas. One of these in particular (*R. Edgeworthii*) has very fragrant blossoms, and being largely employed by the hybridist was transmitted that desirable feature to its progeny.

*R. Edgeworthii* is very distinct from any of the others, and when out of bloom it is particularly noticeable by reason of the dense woolly tomentum with which the undersides of the leaves and young shoots are covered; while the flowers are large, widely expanding and pure white, with the exception of a blotch of yellow towards the base of the upper segments. This Rhododendron is rather straggling in habit, and some of the hybrid forms are more desirable for decoration. One of the earliest hybrids from *R. Edgeworthii* was *Princess Alice*, which was obtained by the intercrossing of this species and the little bluish-coloured *R. ciliatum*. Messrs. Veitch obtained a certificate for this from the Royal Horticultural Society as long ago as the spring of 1862, and it is still a very desirable form. The compact, freely-branched habit of *R. ciliatum* has served to modify the looser growth of its other parent. The flowers are in shape and size about midway between these two species, and before expansion they are slightly tinged on the exterior with pink. The blossoms of *Princess Alice* are very sweetly scented. *R. Edgeworthii* has, in conjunction with *R. formosum*, yielded some very desirable forms. One, *R. fragrantissimum*, was raised, I believe, by Messrs. Rollisson about twenty-five years ago; while the other, *R. Sesterianum*, is older still. Both have very large blossoms, deliciously scented, but the habit of the plant is somewhat straggling. To succeed with them it is necessary that the plants be pinched back freely during their early stages.

*R. Forsterianum* has a remarkably widely expanded flower, white, with the exception of the yellowish blotch. The parents of this are *R. Edgeworthii* and the Moulmein *R. Veitchianum*. An extremely useful group of this section of Rhododendrons was raised by Mr. Davis, of Ormskirk, between *R. Edgeworthii* and *R. multiflorum* (itself a hybrid). These varieties, to which the names of Countess of Derby, Duchess of Sutherland, Countess of Sefton, Lady Skelmersdale, and Mrs. James Shawe, have been given, are characterised by a much dwarfer habit of growth and a far greater yield of blossoms when small than any of those previously mentioned. The flowers of these are all white, slightly tinged in most cases on the exterior, but they are all certainly distinct from each other either in the shape of the blossoms, the habit of the plant, or the edges of the petals, for in some they are nearly smooth and in others prettily crisped. I have been very successful with the members of this group even in pots 5 inches and 6 inches in diameter by plunging them outside during the summer in a bed of cocoa-nut refuse. Under this treatment almost every shoot produces a flower-bud, and so fragrant are they all, that a bloom or two will be detected throughout a good-sized structure, while in quantity they have none of the heavy and (to some) disagreeable smell that results from a large quantity of flowers in a confined space.

A very neat-growing, freely-branched variety is *R. exoniense*, raised some years ago by Messrs. Veitch, of Exeter. This is between *R. ciliatum*

and *R. Veitchianum*, the influence of the latter parent being particularly noticeable in the glaucous under sides of the leaves. The flowers are of a beautiful waxy white, and borne in great profusion. Though very sweet, the perfume of this is scarcely so pronounced as in the preceding varieties. Another hybrid form remarkable for its fragrant blossoms is *Lady Alice Fitzwilliam*. Although the flowers of all these sweet-scented hybrids are white or nearly so, there is still a considerable diversity among them, while the habit of the plant varies greatly. While some can, as above mentioned, be grown into neat little flowering bushes in pots only 5 inches or 6 inches in diameter, there are, on the other hand, some that require to attain a good size before they are very effective, such as *R. fragrantissimum*, that needs a good deal of attention to get in bush form, but I have seen it with advantage employed as a wall plant in a greenhouse. It was planted out in a prepared border, and the position was well exposed to the light, so that it used to flower well. In such a position more particularly the syringe should be freely used among these Rhododendrons, whose greatest enemies are black thrips, but with ordinary care these give little or no trouble unless the atmosphere be too hot and dry. H. P.

#### WINTER-FLOWERING CARNATIONS.

I AM told that some of our large growers of these no longer propagate them from cuttings, but layer them in the usual manner. It would be interesting to know whether this latter method yields results equally good as the one hitherto generally practised. When I first made acquaintance with this class of Carnation it was not customary to increase them in warmth in the spring; indeed, annual propagation was not then considered at all desirable. The plants were kept for several years, and one frequently saw in trade establishments gaunt specimens of such as the Duke of Wellington, which had been cut from for half-a-dozen years. Such plants ran up to a height of several feet, were very woody, and thus merited the name of Tree Carnation. It requires a considerable amount of skill and much attention to obtain good flowering plants from cuttings rooted in early spring. The Carnation is impatient of artificial warmth, and some little time must be lost early in the season before plants raised in heat regain their natural hardiness. Layered plants cannot suffer in this way, and if the layering is done early they will be well established in small pots about the time when it is necessary to insert cuttings. They can go into the open at an early date, and there is no danger of their getting a check from the inclement weather that we are apt to experience in early summer. I do not wonder that growers for profit should be inclined to adopt this plan, for it certainly saves a lot of trouble and expense. If planting out for the summer is practised there is a distinct gain in point of time, for layers can go into the open ground with perfect safety quite six weeks earlier than plants raised in warmth, and these must be carefully hardened off. It is asserted that some kinds, such as *Miss Joliffe*, are wearing out. If such be the case, may not the constant propagation in warmth be in some measure the cause of this deterioration? An acquaintance who has grown this Carnation for market for some years tells me that for some reason or other he cannot fathom it does not now thrive as was formerly the case. The man is a good grower, and his treatment is the same at the present time as was the case when he had no difficulty in obtaining profitable results. There is no disease, but just a lack of sufficient vital energy to enable the plants to produce a profitable crop of bloom. I advised him to change his stock, and, if possible, get plants that had never been in artificial warmth, and from a locality far removed from his own. Here and there one meets with fine healthy stocks of this Carnation, and one would think that if it was wearing out the decline in vigour would be universal. I think that in the case of winter-

blooming Carnations generally it would be wiser to rely more on two-year-old plants. I have found, and especially with the *Souvenir* varieties, that I could always get more bloom from the space from them than from young ones. They do not run so much to leaf, but throw up a greater number of flower-stems, which, if the plants are in good condition, are very strong, and carry blooms of very fine quality. It is an easy matter to get really fine flowers in this way from December till May. Overpotting winter-flowering Carnations is a prolific source of failure. Just as good blooms can be got from 4½-inch pots as from larger ones. Carnations are not nearly so free-rooting as the generality of greenhouse flowers, and the roots are very sensitive to an overdose of water. By the end of September the pots should be full of roots if flower expansion is to go on through the winter months. If plants that are done blooming are put into the open air towards the end of May and shifted in July into pots one size larger, they will be quite root-bound by late autumn. Such plants, if well cared for through the summer, will produce a quantity of bloom just when most needed. Some varieties when thus treated will throw up some flower-stems towards the close of the summer, and these will give good blooms in November. Naturally these two-year-old specimens are not so attractive in appearance as young ones, but the Carnation in winter is more valued for supplying cut blooms than for creating an effect. Provided one can get plenty of nice flowers for button-holes and bouquet-making, it matters little what the plants are like that furnish them. The compost for winter-blooming Carnations should be of a nature that will not readily come into a close, sour condition. I like it to be sandy and with a fair proportion of well-decomposed leaf-soil, varying the amount of this according to the nature of the loam. J. C. B.

**Saintpaulia ionantha.**—Allow me to correct a slight error on page 133 of *THE GARDEN* about *Saintpaulia ionantha*. This lovely plant, which has been discovered and introduced into Europe by my son, never has flowers of 3 inches diameter, the coloured plate showing the flowers about their natural size. It grows best in a rich open compost in shady warm quarters and likes much moisture at the roots. The young offsets which the plant makes plentifully at the collar give the best plants if potted separately in proper time.—*BARON VON SAINT-PAUL, Fischbach, Silesia.*

**Acacias at Syon House.**—Few private gardens have such command of space to grow these plants as here. In the cool portion of the conservatory are huge bushes of such kinds as are not commonly grown. Many of the plants are allowed to run up to the roof and hang down with as few supports as possible. They also fill up odd corners and present a fine aspect. Many of the plants are grown in pots, and all that can be removed are placed outside in the summer. Those most beautiful just now are the following: *A. verticillata* is from 10 feet to 20 feet high, making a splendid bush, the flowers being deep yellow. *A. platyptera* is of different habit. *A. longifolia*, an Australian species, is very pretty and grows erect. *A. Drummondii* is a large pale lemon-coloured form from the Swan River and just opening its flowers. *A. dealbata*, the Silver Wattle, is very beautiful and of large size. This is a well-known species and one of the best. *A. cyanophylla* is a less known form with large yellow flowers; it grows about 20 feet high and is very effective, its long glaucous leaves on drooping branches being very distinct. There are other kinds, but those named are the most effective at this season.—*VISTOR.*

**Agapetes buxifolia.**—This has been well grown in the temperate house at Kew for years, and many notes have from time to time appeared in *THE GARDEN* calling attention to its beauty when in flower. Notwithstanding this, it is still very uncommon, and may in vain be sought for in most nurseries, though I venture to think that a fairly good demand for it might reasonably be

anticipated. This *Agapetes* is a native of the mountainous regions of Northern India, and is there said to reach a height of 5 feet, but being often found in its native state as an epiphyte, it is probably somewhat straggling. Under cultivation, however, it forms a neatly-branched little bush, clothed with deep green Box-like leaves, while the flowers, which are borne on the shoots of the preceding season, are tubular, about  $1\frac{1}{2}$  inches long, and in colour bright red. It blooms usually towards the latter part of February or in March and even April, while in summer the white berries, which sometimes succeed the flowers, are very noticeable. Apart from these features, it is at all seasons a pretty little evergreen shrub. As might be expected from its native habitat, this *Agapetes* needs the protection of a greenhouse; indeed, under conditions suitable to the Indian *Azalea*—it will succeed perfectly. Like most ericaceous plants, and especially those of a somewhat epiphytal nature, it succeeds best in a soil composed of sandy peat, into which the delicate hair-like fibres run with great freedom. Good drainage must be ensured, and at no time should the plant be allowed to suffer from want of water. Treated as *Azaleas* or greenhouse *Rhododendrons*, cuttings of this *Agapetes* root readily. They should be taken when about half ripe, and being dibbled firmly into well-drained pots of very sandy peat must be kept close in the temperature of a warm greenhouse till rooted.—T.

#### BOILERS AND PIPES.

THE late severe weather has tried the heating arrangements in every garden, and I have no doubt that hot-water engineers will soon have their hands full of work. During the last forty years I have tried a good many different kinds of boilers, and I have come to the conclusion that a good form of saddle if well set cannot be beaten. The best form in my opinion is the check-end saddle, and though the east-iron boilers are the cheapest, one feels safer with a wrought-iron boiler; and when a boiler set in brickwork has to be taken out, the expense of one breakdown doubles the cost of the boiler and labour alone. Permanency, therefore, should be considered. The action of many a good boiler has been seriously checked by bad setting, especially as regards the size of the flues. No flue round and over the boiler should be less than 7 inches in diameter, especially if the boiler be of large size, say capable of heating 1000 feet or more of pipe, and it is always advisable to have the boiler large enough to do its work easily. If it has to be pushed with a full draught, some loss of heat must ensue. But with a boiler well able to do its work after the heat has been raised, the fire may be worked with the damper nearly in and the bottom doors closed. Another very important matter is to have a fairly tall chimney. The taller the chimney or shaft, the better the fire works. A careful stoker will get a lot more work out of the fuel than a careless one, who forgets to keep his flues clean or to shut dampers and doors at the right moment. In very large establishments a good fireman will save the cost of his wages every year in the economical use of the flue alone, and there are other matters to be considered besides the mere saving of fuel. The forcing gardener is in a great measure in the hands of the fireman, and unless the fires are well managed it is impossible to obtain the best results. The presence of red spider and other insect pests is often due to overheated pipes at a time when they ought to be only moderately warm. There are many bright sunny days during a long spell of frosty weather, and if the fires are not damped down as soon as the sun appears, the pipes get too hot for healthy growth. Especially is this so where from motives of economy the pipes have been grudgingly used. During hard firing, with the pipes so hot that it is impossible to touch them with the naked hand, unless the work has been well put together, something is very likely to give way, and this is a very awkward

*contrivance* during hard weather. I remember during the severe winter of 1860 and 1861, especially on that particularly trying Christmas eve, I sat up all night with the fires and made the water boil out through the supply cisterns, and yet the frost got in. This, of course, was due to insufficiency of pipes. Again, I do not think there is much economy, especially if the houses are of large size, in attaching too many houses to one boiler. Where the houses are small I should prefer to have them grouped, but on the same level, and then there may be some economy in attaching several to one boiler. But where the houses are 100 feet or more long, requiring say from 1500 feet to 2000 feet of pipe, I should prefer to have them in pairs, each pair to be worked by one boiler. It is important that the boiler should be placed as near and well under its work as possible to ensure rapid circulation. It is often difficult to get a foundation for a deep stoke-hole in consequence of the water rising near the surface. When I dug my present stoke-holes, an old resident said, "Oh, you will never be troubled with water here," but in less than two years there came heavy and continuous rains and the fires were put out. This involved very heavy expense in securing an outfall for a drain, but the thing had to be done, and I am thankful for it now, for it is worth something to feel safe. I have lost all faith in cement for stopping out water in stoke-holes. It can be done, I suppose, at least every builder tells you so, but every man you employ runs you to endless expense and generally fails. If it were impossible to get an outfall for a drain, the best arrangement would be to place the boiler in an iron tank. I know a place where a very large sum was spent in trying to obtain a waterproof stoke-hole, when less than a fourth would have sufficed to have put in a strong iron tank that would have been permanent. E. H.

#### GROWING CROPS FOR PROFIT.

IT is all a question of energy and good management. Some men can get a living where others would starve. If "A Constant Reader" is fully prepared to work hard himself, has had some previous experience in vegetable culture, and has enough capital to stock a place and keep it going for, say, the first four or five months without any returns, then there is no good reason why he should not commence. The vale of Taunton is admirably adapted for the growth of early vegetables, and a considerable quantity are grown in that district for the markets. It is of the greatest importance that such men as "A Constant Reader" should start within at least easy carting distance of both a good market for a portion at any rate of garden produce that it does not pay to send to a distance, and where also a good supply of manure can be carted back. Taunton is a fairly busy town, or a good centre in an agricultural district, but there are no large manufactories of any kind, and the town seems to be already well supplied with all the common vegetables and fruit it needs. If, therefore, good land at £3 per acre rent can be got near to Minehead, that is where I should advise a start being made. One of the best markets for Celery is Cardiff, South Wales generally apparently having a great weakness for both Celery and Cucumbers. In all probability heavy vegetables, these including early Potatoes and Celery, could be sent by boat from Minehead to Cardiff and also Bristol, another good market, more cheaply than by rail, stable manure being had at moderately cheap rates from the owners of barges plying in the same directions. Small holders cannot afford to employ much manual labour unless a very superior system of culture can be carried out. The most successful, as a rule, are men with enough land to keep a cow or two as well as a horse, with pigs and poultry extensively. Much of the cultivation has to be done with light ploughs such as can be drawn by two horses, the extra horse being borrowed or hired as the case may be. In America the vegetable gardens of one acre and fields much larger are all so

arranged as to admit of the greater part of the work being done by horse-power, and, as a matter of course, "turning rows" or headlands have to be left. That very handy American invention, the Planet Junior cultivator, can be bought in this country for about £3, and one of these should be owned by most market growers and nurserymen. Of this combination, for that is what it amounts to, it has been rightly said that it ought to be regarded as indispensable. The machines are light, have adjustable bars so that they can be narrowed or widened at pleasure, and have adjustable and reversible teeth. They can be used either as a plough, moulder, or surface cleaner and cultivator. Drills for Potatoes can be formed, and some portion of the soil can be got out of trench for Celery with the aid of these light ploughs, while the former can have the ground among them loosened, and the moulding afterwards be done, whilst some part of the moulding up of Celery can be done likewise by means of this contrivance.

Both early Potatoes and early Peas, the latter grown without stakes, are regarded as profitable crops, and these would be or could be cleared off the ground in time for Celery to be planted. If the Celery has a fairly heavy supply of manure supplied to it, what will be left of this and the extra working of the soil should prove an excellent preparation for Potatoes and Peas, and the same routine might go on for years, especially if chemical manures were also used after the first year for the latter crop. From what I have seen of market gardening as practised by men who were previously private gardeners, not many of them go to work in the right way. They are too fond of variety and have to pay the penalty. Most small towns are kept well supplied with green vegetables by cottagers and small holders who hawk them from door to door, and the man who depends upon greengrocers to take all he can grow very frequently has to give the best portion of some crops to the pigs. "A Constant Reader" apparently does not intend to make this mistake, and he will do well to hold to the resolution to grow early Potatoes, Celery, and, let me add, early Peas extensively and almost exclusively till he can hit upon something more profitable. W. I.

## GARDEN FLORA.

### PLATE 1005.

#### HABENARIA CARNEA AND VARIETY.

(WITH A COLOURED PLATE.\*)

THESE are so well depicted in the accompanying illustration that any further description would be superfluous, a glance being sufficient to show how beautiful they are when well cultivated. It is in the winter treatment that growers are more apt to go wrong with these Orchids than while they are growing. The stems have died down, the plants are probably placed in an out-of-the-way corner and allowed to get quite dry. A gradual waste of the energies of the tubers and roots then sets in, and the plants are either killed outright or so weakened that they cannot flower. What they require is a low and rather moist temperature. The soil about them should never be allowed to be quite dry or be watered oftener than is necessary to prevent this. Then when they break up in spring there will be fine healthy shoots and robust flower-spikes. Coming as they do from Singapore, they delight in a strong moist heat while growing, and during this season must be kept moist at the root and be protected from the direct rays of the sun. After the flowers are past, they may with ad

\* Drawn for THE GARDEN by H. G. MOON in Mr. Sauter's nursery at St. Albans. Lithographed and printed by Guillaume Severeys.





vantage be inured to more sunlight, lessening the supply of water gradually and lowering the temperature. As hinted on p. 113, February 16, *Habenarias* are deserving of more attention than they at present receive, being a very interesting and attractive class of plants, and it is to be hoped that the publication of this plate may be the means of extending their culture.

H. R.

## KITCHEN GARDEN.

### TOMATO GROWING FOR AMATEURS.

AMATEURS are very apt to be over-zealous in the matter of starting Tomato growing. I mean they commence with either seed or plants earlier in the year than their conveniences justify them in doing. In order to be certain of a remunerative crop the plants must be grown quickly, though not rankly; they must have a fair share of room and sunshine, and must not be subjected to much moisture in the atmosphere. Very few amateurs are in a position to devote a well-heated house solely to Tomato culture. Instead of this they have to do the best they can with them in houses largely devoted to the growth of ordinary greenhouse plants, of which they contrive to collect far more than they can properly manage. The first step towards ultimate success with Tomatoes, if it rested with me, would be a rather wholesale clearance of miserably over-potted, diseased and insect-infested *Carnations*, worn out zonal *Pelargoniums*, old or flowerless *Primulas*, *Chrysanthemums* that have some time since ceased flowering, three parts dead *Indian Azaleas*, *Camellias* in no better plight, and such like. Those plants reserved would present a more attractive appearance after a re-arrangement has taken place, and the bedding plants being relegated to shelves, a space along the back of the front stages can be kept for Tomatoes in pots or boxes. Even if all this can be done it does not follow that February is a good time to start. It would be if a night temperature of from 50° to 55° could be maintained, but March or early in April is quite soon enough to start where fire-heat is somewhat sparingly used, while if fire-heat is only given when frosty nights are expected, early in May is quite soon enough to place the plants in their fruiting quarters. Puny, much-drawn-up plants produce fruit very sparingly or not more than one or two where there ought to be a cluster of six or more fruit, and it is very certain that plants which change to a sickly yellow colour owing to want of warmth or sunshine will never thoroughly recover.

Amateurs are frequently very undecided as to whether to raise their own plants or to purchase as many as they require. If they want several dozen plants, then I should advise them to raise their own, but if one or two dozen are all they have room for, then their best plan will be to buy them. They are largely advertised in the horticultural papers principally supported by amateurs, and I believe can as a rule be depended upon to come true to name. There are now so many varieties nowadays all presumably second to none, that it is a bewildering matter to select which shall be grown. For a quick early crop *Early Ruby* is hard to surpass, and either *Al Challenger*, or *Ham Green Favourite* would form a good succession. These latter are very productive varieties, the fruit being of medium size and good in form or colour, while if a handsome show variety is needed, try either *Duke of York* or *Perfection*. *Sensation* and *Hackwood Park* are a little coarse, but they possess good constitutions and crop heavily. If the packets received contain several score of seeds, do not sow the lot unless nearly as many plants are required, as crowded seedlings only spoil each other. Sow the seed very thinly in well-drained 6-inch or larger pots or pans, using fine sandy soil, give a gentle watering, place not far from the hot-water pipes at the warmest end of the house, cover with

a square of glass, and shade. Give a watering through a fine rose whenever the soil approaches dryness, and remove both the shading and glass directly the tops of the seedlings are well out of the soil. Before they become much drawn, transfer to a shelf near to the glass with a view to strengthening, prior to placing them singly in 2-inch pots. This latter should be done directly the plants have formed two leaves other than the seed leaves. Use light loamy soil previously warmed; lift the seedlings out of the soil with a label and sink them deeply down the sides of the pots. Those who have plenty of warmth at their command need not take so much trouble, nor need they place them in such small pots, but the amateur has to be most painstaking to make up for other deficiencies. The newly-potted plants should be stood on a warm staging, given a gentle watering—warm water both then and at all times being used—and shaded with a newspaper from bright sunshine. Directly they have formed a few fresh roots return to the shelves. In from a fortnight to three weeks after their removal to the shelves they ought to be ready for their final shift. No greater mistake than keeping them too long in small pots can be made. Directly they become root-bound the top growth hardens and becomes spindly, and if the fruiting quarters cannot be got ready for them by the time the plants are fit, give the latter a shift into 6-inch pots and keep them growing sturdily in these. This hint should also be profited by those gardeners who place their seedlings in small pots and are not able to shift them into their fruiting quarters either under glass or in the open just when they are ready for them.

Plants offered for sale are usually despatched by parcels post, and are, as a matter of course, shaken nearly clear of soil prior to packing in light boxes. In May or early in June such, when received, might be placed direct into their fruiting quarters, but earlier in the season they ought first to be recovered from the severe check given. If 4 inches and upwards in length and well rooted, place them singly in 4-inch or rather larger pots, smaller plants getting smaller sizes. Keep them somewhat close and warm till they are rooting afresh, when a sunny staging or shelf would be the best place for them. In this case, again, there should be no undue delay in transferring to fruiting quarters.

Next a few hints as to the fruiting quarters. Various sites can be turned to good account in Tomato culture, but amateurs will do well to depend principally upon plants arranged along the sunny fronts and trained up the roofs of the houses. A row of 10-inch pots might be set just clear of each other, a single plant going into each, or rough boxes of some description could be arranged in a row, and plants put out 12 inches apart in a single line. If the staging could be slated or tiled over, then both pots and boxes could be dispensed with, a ridge of soil 15 inches wide at the base and 10 inches deep being substituted, putting out the plants 12 inches apart. No particular mixture is absolutely necessary, but if good brown fibrous loam is plentiful by all means use it freely, adding to every four bushels one bushel of nearly fresh horse droppings. We have to be content with a mixture of three parts of good garden soil of a clayey loam nature to one of horse droppings, adding a sprinkling of road grit and fine mortar rubbish. If available, a 6-inch potful of steamed bone-meal should be mixed with every bushel of soil, or some special artificial manures may be substituted, using these at the rates advised by the vendors. In each and every case, or whatever moderately rich mixture of soils and manure may be made, either place it in the pots, boxes, or ridges a week prior to planting in it, or else warm it by means of a few heated bricks buried in the heap. Pots should be only about half filled at first, and equally good room be allowed in the boxes for top-dressings. See that the soil in the small pots is thoroughly moist prior to turning them out, and later on it is of the greatest importance that these balls of soil and roots be kept

uniformly moist without, however, badly saturating and souring the new soil surrounding them. Plant firmly and leave a hollow in the centre, so as to be able to water the centre readily and without using much of it. From first to last remove all the side shoots that spring from the axils of the leaves on the main stem, and when the points of the lead divide, as strong plants frequently do, cut away one of the two and the other will continue to extend upwards. Never delay this work of removing side shoots till it is necessary to use a knife, or otherwise there will be so much vigour wasted, light crops also forming on neglected plants. Stakes will be needed to support the plants till such time as the roof trellis is reached, and it is immaterial whether the latter consists of wires passed through galvanised eyes 9 inches in length, and screwed into the wood-work of the roof, straining these across the roof at a distance of 10 inches apart, or a trellis is temporarily formed with bamboo or other light stakes. If there are any very large ugly flowers in the centre of strong trusses pinch them out, as they are invariably followed by ugly fruit, and their removal will greatly strengthen the rest. During the flowering period give a smart tap to the stems everyday towards noon, this distributing the pollen and effecting a good set of fruit. Long before many fruits are beginning to swell top-dress with rich compost, taking care, however, to water when the soil underneath is getting dry, not waiting till the unoccupied fresh soil shows signs of dryness. Repeat this top-dressing directly that last given is crowded with roots, and a fortnight afterwards either give a light surfacing of special manure, or else use weak liquid manure frequently. Plants bearing heavy crops must be well fed up at the roots, abundance of water or liquid manure being most necessary in the case of plants with a much limited root run. Avoid wholesale mutilation of the leaves. If they smother the ripening fruit, then reduce them in size considerably, but do not cripple the plants by robbing them of the best of their lungs and digestive organs. A dry atmosphere, and which means a little to pair when the house begins to feel warm and moist, is most imperative. SELWOOD.

**Large Onions.**—I have been interested reading Mr. Iggullen's article on heavy crops of Onions and the right way to obtain such crops, but I have found—as doubtless Mr. Iggullen and others have—that large Onions are not the best for keeping. This year our large Onions have kept badly, while the small and medium-sized ones have kept very well indeed. Large Onions are excellent early in the season, but for keeping well give me specimens below the medium size of *Brown Globe*. The production of large Onions for exhibition is well understood by the cottagers in Lancashire. Some years ago the late Mr. Samuel Barlow took me through some of the best gardens in the neighbourhood of Middleton, and I was particularly interested in the culture of *Celery* and Onions. The Onion seed is sown on February 1 in very small pots, three seeds in the centre of a pot in good, rich, firm soil. One plant only is allowed to grow. The seed is not sown in a hot-bed, or, at least, if placed there to vegetate, is speedily removed, as the object is to obtain a steady vigorous growth from the first. The plants are kept near the glass until it is time to plant them out, and this is done as soon as the weather is favourable. They are planted in rich deep soil, and as the leaves develop they are carefully tied up to a trellis so that none of them will be bent, bruised or broken. None but enthusiasts in Onion culture would take such pains. J. DOUGLAS.

**Early vegetables and salads.**—I see frame culture and hotbeds are recommended to obtain early vegetables. This they will do, but they are rather inconvenient in small gardens. Where there is plenty of glass and ample space it is easy enough to obtain what is wanted. I sow Cabbage and Cauliflower seed in boxes, and it vegetates rapidly in the early vinery, the seed-

lings being pricked out when they have grown enough. To those who have no room for frames hoisted on to a hotbed, and who cannot afford vineries and forcing houses, I can recommend the appliances called ground vineries. They were invented by the late Mr. Thomas Rivers, of Sawbridgeworth, to grow Grapes. They are 2 ft. 6 in. wide at the base and in the form of a triangle, and in 7-foot lengths, with one close end only, so that when two are put end to end they are long enough to cover a Vine 14 feet in length. Some persons may say: How can you grow Vines in such a low structure, about 18 inches or so from the surface of the ground to the apex of the roof? Vines can be grown, and such as will produce excellent Grapes. I have grown capital Black Hamburgh Grapes in them, the bunches weighing from 1 lb. to 2 lbs. each. The Vines are pegged to the ground, and the growths trained over slates laid flat out on the ground. After a time I had plenty of Grapes in ordinary vineries, and for twenty-five years I have sown all my very early crops under the ground vineries. Early Carrots are sown, and between the rows of the Carrots Lettuce and Radish seeds. The Lettuce plants are thinned out to be planted in the open garden. Celery seed is also sown for the early crops. My own experience with Celery sown in boxes and placed in vineries, and even hotbeds, to vegetate is that it will often run to seed in the autumn, or even in summer, when seed sown under ground vineries will not do so. The vineries can if required be placed on the Vines in April after they have given the early vegetables a good start.—J. DOUGLAS.

**Potatoes.**—The season for planting these will soon be upon us again, and as varieties are so numerous one is almost puzzled to know what to plant. Those who have only the limited space of a kitchen garden in which to grow their supplies are not able to test the numerous new varieties, as every available inch of ground is required for the production of other crops. Of the many varieties introduced during late years, none are better adapted for the kitchen garden than Sutton's Supreme and Windsor Castle. With these two and a good early Ashleaf kind, a supply may be kept up the whole year round. Those, however, who have the command of field space can grow many more varieties. There is, however, nothing gained by growing so many sorts. It cannot be too deeply impressed on those who have not had experience in preparing the sets that one of the chief roads to success is to prevent the tubers intended for planting from making premature growth. All seed should be spread out on shallow trays or shelves, where they can be exposed to the light without fear of being caught by the frost. Fair-sized sets should be chosen, and if these are allowed to make short, stout growths before being planted, they will doubtless grow more evenly afterwards. I prefer whole sets, as from experience I find that such produce the best crops. During the dry summer of 1893 many of the cut sets failed to grow, particularly those that were planted late and had previously had the shoots rubbed off them. In some fields nearly one-half of the rows planted with sets so treated failed. In all cases the soil should be well worked and rendered as fine as possible previous to planting. Avoid covering the sets too deeply on heavy soil: if planted on the surface where sufficient earth can be drawn over them, they will do far better than if planted too deep.—H. C. P.

**Scarcity of salads.**—Doubtless this winter will have played sad havoc with winter Lettuces, but there are several ways of growing green salads if only required for cutting up for the salad-bowl. I do not intend to write on the value of Mustard and Cress, as everyone may grow this in quantity, but how many fail simply because they cover the seed with too much soil. The best results are secured by sowing on the surface and merely covering the seed with glass or paper till it has germinated. Again, how readily Dandelion is forced for salad in only a warm greenhouse under a stage, the leaves being of a pale green colour and of great value in the early spring. Chicory

is also good, but though readily forced, this with Dandelion may be too bitter, but is excellent if used with Mustard and Cress and other salads. The green tops or blanched portion of Celery is a delightful addition to the salad-bowl if used sparingly. The little-used Corn Salad or Land Cress is very hardy, and, sown in the autumn in quantity, is useful for early spring cutting. Watercress may be grown to perfection without a running stream. My method is to sow a box of seed in a frame or house in February, and when above the soil prick off or transplant into other boxes. As growth advances water freely, always using tepid water and light soils for the roots. When of good size, the plants lift well if properly hardened, and planted under a wall and sheltered for a time with copious supplies of water during the season, they will give a good supply at a small cost. But my note is more applicable to the production of salads even earlier than that advised by planting Watercress in the open. If some boxes are planted and kept indoors they give a lot of shoots, as, unlike Mustard or Cress, the more Watercress is cut, the thicker it grows. Another ready way to obtain small Lettuces for cutting is to use a small or early kind and sow in boxes, and when about 4 inches high to cut over in the same way as one does with smaller salads. A cheap kind is most suitable, and it is surprising what a lot of material an ounce of seed will produce. Of course such Lettuce is only good for the salad-bowl.—W. S.

#### PEAS FOR MARKET.

THE prolonged frosty weather has much interfered with the routine work of those who grow Peas for market. Growers like to get the seed for the earliest crop sown either at the end of January or early in February, but according to the present outlook there appears no chance of the seed being sown until the end of the month—in fact, not until it is time that the second earlies should be got in. My remarks apply chiefly to a class of cultivators that grow Peas largely for distribution in the great northern and midland towns. The acreage of each is not great. They for the most part hire a field or two where the land is suitable, only retaining the land long enough to get the crop. Preference is always given to a sandy, loamy soil that is naturally well drained for the earliest crop. Land that is somewhat heavier is reserved for the late crop and for Peas that have a stronger growth. The land is not, as a rule, ploughed until just before the Peas are sown, nor is it turned up too deeply, as it is usual for the ground to be manured before ploughing. If it be buried very deep the crop does not benefit from it, as early Peas are not deep-rooting subjects. I notice that the class of cultivators to which I allude are careful not to work the ground while it is wet. Especially is this the case with regard to ploughing. Harrows are used to level down the surface after the plough when the surface is fairly dry and the seed is put in by a drill.

With regard to the sorts of Peas grown for market, very few of the newer kinds find permanent favour. They are either too tender or not sufficiently productive. I am acquainted with one grower who last year tried William Hurst on rather a large scale, but it proved unremunerative as a field Pea. The growth was too dwarf to be productive. Harrison's Glory and Eclipse as second earlies are more largely grown than any other sorts, although not exclusively so. One would hardly expect to find the Blue Scimitar in favour now that there are so many other sorts to choose from. Those who grow it have, however, a select stock which they are careful to keep from deteriorating by judicious selection. As seen growing, the Scimitar appears able to resist drought better than any other kind I have seen, and it is not so subject to mildew. It, however, requires a fairly rich soil and deeper cultivation than is provided for the earliest sorts. Day's Sunrise is a profitable market Pea with those who have a rather deeper soil than is usual. It should have 6 inches more room between the rows than is allowed

for some of the others; 2 feet between the rows is what is generally allowed, but at that distance the plants are often crowded. As those with stronger growth are acknowledged to be the most productive, the distance might in good soils be increased 6 inches or 9 inches more. There is a round white-seeded Pea of the type of Daniel O'Rourke that is frequently grown by those who have warm and sheltered fields in which to grow it. This sort appears to be principally confined to the west country growers, who appear to take some pains to keep the stock pure. One grower in particular takes the trouble once in two years to grow a few rows in his garden for seedling, and weeds out any plants that do not come up to the character of the type. I have no doubt this is a good way to keep a pure stock. An inspection of the different crops when growing reveals the difference in the size and length of the pods as compared to those that are produced by a stock less carefully selected. An early crop of this sort very often proves to be the most profitable investment, although at no time do the growers experience any difficulty in clearing out their produce. I am assured it is the small quantities that are sent to local markets that do not realise so much money. The choice of a suitable soil and climatic influence are evidently the first considerations for those who wish to embark in the business of growing Peas for market. North Petherton, the district to which my remarks chiefly apply, is one of those favoured localities that in all respects is eminently favourable for the production of all early crops of vegetables, Peas especially. Seeing that it is not more than six or eight miles from Bridgewater Bay, it will be understood that climatic influence is all in favour of the cultivator. J. C. CLARKE.

#### NEW ASPARAGUS BEDS.

WHERE it is intended to plant fresh beds of this vegetable in spring they should now be got ready in order that they may duly settle. The mixing of the soil and general arrangement of the bed must depend entirely on the position, subsoil, and nature of the staple soil of the site it is to occupy. If favoured with a gentle inclination to the south, a fair depth of open porous soil, and a natural drainage, nothing more is wanted than a thorough trenching two spits deep and a free admixture of rich manure in a semi-rotten state, some rough leaf mould, road scrapings, and burnt refuse. In such positions raised beds are not necessary, and if the old-fashioned 4-foot beds are preferred, all that is needed is a 2-foot alley between them, stout stakes being driven in at the corners as boundary marks. On clay or very retentive bottoms the preparation is much more difficult, as if a free escape for all superfluous water is not provided, failure must ensue. In the first place the soil should be removed to a depth of 18 inches and of the required width, wheeled on one side, and where sufficient new soil of a suitable character is not obtainable, a portion of it burnt to be mixed with the new soil as the work of filling in proceeds. The bottom of the excavated portion should gently slope to one side, along which a main drain of 4-inch pipes should be laid, cross ones being connected at intervals. Where this drain cannot be let into the main drain of the kitchen garden, a well may be formed by digging a hole some 6 feet deep and filling it up with rough stones, clinkers, or brick ends, connecting the pipe with it. Then over the bottom lay from 6 inches to 8 inches of the same rough materials, and on this rough sods from any waste pasture, grass side downwards. In filling in, if new soil is not at command, that from some lighter part of the garden may be used, adding a large percentage of the opening materials recommended above and one-fourth of the original soil in a burnt condition. If horse manure can be had it will answer better for this bed than ordinary farmyard manure. It will also be advisable to raise the beds some 6 inches above the ordinary level, this increasing the warmth at the roots and keeping them in a drier condition generally. I have



now abandoned the old 4-foot beds on warm, light soils, preferring to plant in single rows, with 3 feet from plant to plant and the same distance between the rows. Thus favoured with plenty of light and air the plants make rapid growth and quickly meet each other, stout grass and plenty of it invariably following. J. CRAWFORD.

**The frost and the crops.**—Although some districts have been visited by intense frost than others, it is now pretty certain that very few green vegetables will escape the ordeal, and that prices will run high during the coming spring and early summer. In our own garden not only will all Broccoli in the open be killed down, but Cabbage sprouts and Brussels Sprouts also. Scotch and Asparagus Kale may escape, but they will be very hard hit. Young spring Cabbage plants and Spinach owing to their being well covered by the snow will, I trust, escape with only a crippling. We have had to cover over hand-lights with mats and litter to save the autumn-planted Cauliflowers. In this district from 36° to 40° of frost have been registered.—J. CRAWFORD, Newark.

**A note on Onions (E. B. C.).**—I consider it proved beyond a doubt that transplanted Onions are more to be depended on than those sown in the ordinary way. Yearly I sow a few, generally Bedfordshire Champion, but I never can depend upon them, while I am almost certain of having a crop of good bulbs in my transplanted lot. Cranston's Excelsior, Trebons, and White Spanish are my favourites. I do not sow any of the autumn Tripoli kinds, as they do not keep long enough. I sow Excelsior in boxes in September, stand them in a cold frame during the middle of the winter, and plant out as soon as the weather and ground are favourable in spring. These do not run to seed, ripen early, and give a heavy keeping crop worth harvesting.—J. B. O.

**A good forcing Bean.**—Those who require early dishes in advance of the first gathering in the open should grow the new climbing French Bean. This, grown in large pots with a few sticks to support the tops, is most valuable, as one may gather in quantity Beans of equal quality to those in the open. Many have cool or fruit houses where a few pots of this variety may be grown. I had it last season in a late Peach house, and was well repaid by the quantity and quality of the crop. Seeds sown early in April will produce nice dishes late in May at a season when choice vegetables are none too plentiful. My plants were in 12-inch pots, topped at 3 feet from the pots, grown in front of Peaches and well supplied with moisture overhead and at the roots. Those who have lofty houses may allow their plants to run up more, but they fruit freely when topped, and are more prolific than the dwarfer kinds. They do not get so tough, the pods being more fleshy and less stringy.—S. H. B.

**Duke of York Tomato.**—This new Tomato will soon get popular, and doubtless be a good companion to Perfection and Ham Green. The plant crops well and the fruits are of fine appearance, being scarlet, solid, with very few seeds, and just the size required for sale or private use, whilst they are of splendid flavour. I have seen some large fruits where thinning has been done, but this is no advantage. I would prefer those of medium size and in quantity. If the plants are allowed to carry eight to ten fruits in a truss, they will be quite large enough. For pot culture or planted out on a shallow bed, this variety crops well; the foliage is robust and the fruits ripen in quantity at one time. A large grower, who supplies the market in large quantities, told me this was a valuable variety for market.—G. WYTHES.

**Daisy Pea.**—This is a fine Pea for forcing in pots, boxes or any other method which may be adopted to raise an early crop for planting out. It is one of the Marrowfat section with a good-sized pod. For many years I have grown Stratagem, one of the best varieties ever sent out, because

of its free cropping and splendid quality when cooked. The Daisy Pea may be called a dwarf form of Stratagem and is equal to that variety as regards cropping and quality, but is an earlier or quicker podding form. Many grow the small white-seeded varieties for early supplies, but for pot or frame culture I do not consider them worth the trouble. For frame culture the Daisy is unequalled, as being only 15 inches in height it can be grown in a small space and the haulm is weighted down by the crop. In any position it is best to place small sticks to support the haulm, as the pods being large for the small top, supports are necessary. For sowing in the open to succeed such varieties as Chelsea Gem it is unequalled, and as it takes up little space it is suitable for all gardens. I gathered this variety the third week in May, 1893, on a south border from seed sown in the open. I admit it was an exceptional season, but I do not know of any second early variety more reliable or of better quality.—G. WYTHES.

**Crimson Ball Beetroot.**—Salads will be scarce this spring, so those who can secure a good stock of early Beetroot will find it a welcome addition to the salad bowl. The Turnip-rooted section is specially adapted for early culture, and if the seed be sown late in March on a warm sloping border, this variety may be had fit for use at the end of May. I do not know of a better variety than Crimson Ball for first sowing. It is a great acquisition to the list of Turnip Beetroots and the earliest I have grown. A pinch of seed is sown in a pan or box and the seedlings potted off. They are planted out when ready on a warm, sheltered border, and the one named is admirably adapted for forcing, if the term can be applied to this root. Sown in the ordinary way early in April, this variety is fit for use in June, and the roots when sent to table are of splendid colour. It is not a vigorous grower, so occupies but a small space, and the roots keep firm and good a long time if lifted and placed in soil on a north or shady border.—G. WYTHES.

#### EARLY CAULIFLOWERS.

THERE will doubtless be a considerable loss of the autumn sown plants with such severe frosts as we have experienced during the past month. To make sure it is well to prepare for the worst, and by sowing in heat to a certain extent make good any losses that have occurred. This vegetable is always more appreciated in the early part of the summer before the Peas, Beans and Marrows are plentiful, as later in the year the heads are stronger and not so much in demand, so that it is well to get a plentiful supply through May and June at a season they are more useful. For sowing in heat there is a good selection. For earliness, Snowball is one of the best. It is not large and should never get checked during growth, or it will turn in prematurely. Another very fine kind is Veitche's Foreing, a valuable small variety and suitable for pot culture. The heads are white, close, and just the size for table. If seed be sown now the heads will be fit to cut at the end of May. This variety is very dwarf and may be planted rather thickly. It is a splendid frame Cauliflower. The Pearl is good for early crops and the heads are of fine quality, but it is later than those named above. Last season I saw some very fine crops of Sutton's First Crop from plants sown early in February in frames. It is a splendid forcing variety, the habit being dwarf and compact. There are others, but those named are all good for sowing under glass for early supplies. I have seen it stated that there is no gain whatever in sowing the early varieties in autumn when the losses are considered. I do not think so, as the losses are few if the plants be sheltered from cutting winds and not exposed too much after frost. It is a great advantage to have a good stock of plants for early March planting. Grow the Waleheren and Dwarf Erfurt for spring cutting. When the seed is sown as advised at this date it requires care from the start. If the plants are not well hardened off there are losses at planting time. Sow a box of seed in a warm house, and

when the young plants are above the soil transfer them to a frame. There will be plants ready to prick out on a warm bed in a month's time, and these, given protection with a frame, will be fit to place in the open in two months from the time of sowing the seed. Plants grown in this way may, if required for a special date, be grown on a bed with frame protection, and will soon turn in if given plenty of liquid manure.

G. WYTHES.

**Dwarf Gem Brussels Sprout.**—I recently saw a splendid quarter of the above variety, which is certainly a gem, the sprouts being small or what may be termed medium-sized, of good flavour and very solid, whilst the plants are dwarf and hardy. This variety this season has stood the severe weather much better than the large kinds, and as regards flavour it is excellent. Many do not grow the dwarf kinds through their supposed small yield, but such is not the case, as the plants may be put more closely together, and if weight of produce be taken into account, they produce better crops.—G. W.

**Arctic Kale.**—As the name implies, this Kale or Borecole should be the hardiest of all Kales, and it certainly is, as with the thermometer below zero on several occasions I thought it would have been too much for most of the plants, but on February 18, when we had a slight thaw, this variety looked well, the hearts being quite sound, and there was no injury to the stem. I saw this variety exhibited in splendid condition last spring and made a note of it for trial, especially the purple variety, and it is very good at this date. Though the seed was sown late in April, the plants are well furnished with finely curled leaves, which quite hide the stem from view. This variety being a large grower requires space to develop, and should not be crowded in the seed bed. Treated thus, with the seed not sown too early, it is certainly one of the best winter Kales grown, and one that well repays for the room given to it. Those who require a quantity of late green vegetables for April or May should give it a trial, as after the first cutting the sprouts are produced in abundance.—G. W.

**Salading.**—The season being so far advanced, any remaining stock of Chicory may be stored in a spare pit or frame, protected at night from frost, and one light blanched at a time by covering with mats or litter. In Mushroom houses it comes on rapidly at this date, and cannot then be kept in a usable state for long; whereas in the former position it can be preserved for any length of time. American or Sand Cress may be sown in sheltered nooks this month, and small salad now brought on in cooler houses than heretofore. By these means the quality of all is improved.

**Planting Rhubarb.**—In gardens where there is much demand for forced Rhubarb, planting to a greater or less extent is necessary each season, or the stock soon runs out. Where large stools exist that are forced where they stand, or come on gradually by being covered with litter, portions may be detached from them and planted out on good open soil, well enriched with manure. Sufficient should be grown to allow of a number of three-year-old crowns being lifted for earliest forcing each year. Prince Albert is unsurpassed for the purpose, but care must be taken where a new stock has to be purchased, as this variety is hard to obtain. It is small in growth, but bright in colour and of delicious flavour. Johnston's St. Martin is likewise a popular sort for early work, and deservedly so. For making late growth and for making wine and jam, Myatt's Victoria is a capital variety. Later supplies may also be had by planting in positions somewhat shaded, even behind north walls.

**Early Turnips.**—In favoured localities and where the soil is of a warm, genial nature, a small plot may be prepared towards the middle of the month for sowing seed of Early Milan or the old white Dutch Turnip. Both of these are reliable

for early work, as they seldom run to seed. I would advise sowing both varieties, as Early Milan does its work in a little less time than the Dutch, the latter forming a good succession and remaining in excellent condition for a considerable time. In midland and northern districts it is advisable to wait till the first week in April before making this sowing, and even in warm counties raised beds and extra sheltered borders are necessary. Guano or powdered fowl's manure placed on the surface of the bed after the seedlings are thinned out helps to forward the crop, these being of a heating nature. A few Yew boughs placed here and there about the bed as soon as there are signs of germination form a good shelter and hasten growth. Protect from birds, or the crop is doomed.—J. C.

#### CAPSICUMS AND CHILIES.

THESE useful and ornamental plants do not appear so frequently in many gardens as they did some twenty years ago. In those days they were grown in quantity for room, table and conservatory decoration, and very effective they were. The only neighbourhood that I have seen any number grown of late years is about Cheltenham, and at the September shows until recently held there Capsicums formed a very striking feature in the collections of vegetables, and the judges certainly gave those collections the preference that contained a mound of these fruits in mixed or separate colours. Whether Capsicums should be counted a telling dish in a collection of vegetables is a question that I have had doubts upon, and some judges would be apt to disqualify such collections, no matter how well grown they were. The variety the Cheltenham growers principally favoured was named Bull's Nose, each fruit being about as thick as it was long and slightly corrugated. Of the very large type, Red Giant is one of the most useful, and was preferred to all other varieties in a former situation that I held, and where Capsicums were in demand, the fruits being liked best in a green state, the flavour being considered superior then to when they were ripe. The red and yellow Tomato-shaped are also excellent; the flavour is mild both in the green and ripe state. If a particularly hot Capsicum is appreciated, Long Yellow will be useful; even veterans from India or other warm climes I have heard exclaim against its pungency. For decoration, Prince of Wales is about the most ornamental variety; the fruit is small and of a bright yellow colour, set freely amongst bright green leaves. A lovely companion to this is Crimson Bouquet Chili. These two should be grown together, or rather placed side by side when decorating, as they form a striking contrast to each other both by under natural and artificial light. Coral Red is another charming Chili, the foliage and fruit being specially attractive by lamp or gas-light. It is also well worth growing as a table plant.

The culture of these useful plants is very simple, and, provided insects are not allowed to infest them, good results can be secured with the ordinary treatment given to half-hardy plants in warm districts. Seeds sown at any time in February in light, rich soil and placed in a temperature of about 65° will soon germinate. As the seedlings get well through the soil, it is advisable to place them near the glass to prevent their becoming drawn; short, sturdy plants are thus secured, that will be more fruitful than is possible with those that were drawn and weakly in their infancy. Immediately the seedlings are large enough to handle they should be transferred singly to small pots, still keeping them close to the glass. As the pots become full of roots a shift into a larger size will be beneficial, but, as a rule, a 6-inch pot is large enough for the final shift. In pots this size, weak liquid manure given several times a week in hot weather will assist the plants and their fruit, and by its invigorating influence help to keep down red-spider. Towards the end of May the plants may be placed in a warm and sheltered position outside, or, what is better still, they can be grown in cold frames, syringing the

plants morning and evening, and shutting up in the afternoon with a good sun heat. In this manner a dull, wet or cold season does not spoil them as if outside, and handsome plants are obtained that are useful for decoration or for their fruits. W. G. C.

## FLOWER GARDEN.

### SPRING BITTER VETCH.

(*Orobis vernus*.)

THIS is one of the best and hardiest of spring flowers, one of a family many of whom are beautiful and nearly all hardy. Its brilliant bloom has a curious and striking colour—harmony of crimson, purple and blue that is well set off by its bright, clean-looking leaves. It is a good plant for the rockery or the front edge of the flower border. The black roots form very tight and close masses—a fact the practical gardener becomes keenly aware of when every three or four years he has to divide the clumps.



*Spring Bitter Vetch (Orobis vernus). Engraved for THE GARDEN from a photograph sent by Miss Jekyll, Muashead, Godalming.*

It is wild in low alpine districts in thin woody fringes, but in the garden does well in almost any soil and position. G. J.

#### FLOWER GARDEN NOTES.

SPECIAL SUMMER FLOWERS.—FUCHSIAS.—It is only within the last few years that the greenhouse Fuchsias have been used for outdoor planting. Plenty of gardeners doubtless remember the time when the family was only represented outside by such sorts as gracilis, globosa, and Riccartoni. Following these came the variegated form of gracilis, with Sunray and Meteor to furnish a type of variegation somewhat different in style to that obtainable from Pelargoniums. Then there was an attempt with such old sorts as Rose of Castile and Mme. Cornelissen, and these proving a success, few flower gardens of to-day are considered complete without a goodly supply of Fuchsias. The old hardy sorts are not used so frequently as they might be, especially on borders of large size; the long graceful shoots with the small leaves and flowers tend to make the plants very effective when grouped with large-leafed shrubs or tall herbaceous things. They are seen to advantage on either side, a porch backing up plants of dwarfer habit. I have only had a failure with these Fuchsias once in thirteen years, and that was in the very trying summer of 1893; they could not hold their own on a light soil, growth was poor, and the flowers scanty and quickly over. A good mulching would have helped them, but the mulching material was wanted for other things. Greenhouse varieties, whether young or old cut-back plants that are intended for the open air, should be grown along quickly, that they may have time to develop into

the size required, and also to allow for a sojourn for a time in a cool house before they are planted outside. Excessive formality in the way of stopping, staking and tying should be avoided, and they should be planted thinly. A few nice plants showing a dwarf carpet between them make a far more acceptable bed than crowding them up together. Free-flowering varieties of sturdy habit are the best for outdoor work, the colours being selected to meet the requirements of the planter. In that section with scarlet sepals and a purple corolla I have been growing for some years a variety called Duke of Edinburgh. I was considerably surprised to see it catalogued in 1894 as a new variety at 7s. 6d. per plant. It is one of the most vigorous Fuchsias in cultivation, blooms very freely, and possesses the merit of retaining its flowers longer than many varieties. It is a capital variety grown in large pots for the summer clothing of pillars, portions of verandahs, screens, &c.

TROPEOLUMS.—The introduction of one or two new varieties of sterling merit has given an impetus to the cultivation of Tropæolums, and few gardens are now without them. Vesuvius holds its own as one of the best scarlet flowers obtainable, coming quickly into bloom and holding out well until the advent of frost. Mrs. Clibran is a very pretty shade of yellow; it will do with rather better soil than is advisable for most varieties, being of very slender habit. The trailing varieties Ball of Fire and Clibran's Gem are also good bedders; they are seen to the best advantage when planted in raised beds where they are allowed to ramble at will. A grand mass of colour is also obtainable on such beds with the aid of the old Canary Creeper. The centre of the bed may be heightened with a mound of twiggy stieks, other sticks being laid about the bed on which the plants can ramble, and the seed dibbled in the soil towards the end of April. Stronger plants that come away without a check are secured in this way than by sowing in pots and transplanting. Plenty of self-sown plants will come up from such a bed after a mild winter, but one is hardly likely to see them in the spring of 1895. Double Tropæolums, though not often used, are occasionally useful for poor dry slopes; if planted in fairly good soil, the foliage is developed to the extent of smothering the flowers. The beauty of all the tender annual Tropæolums is, however, eclipsed by the perennial *T. speciosum* if a suitable place can be found for it. If anyone has a big rough stump or a portion of a rockery to cover in a cool, moist, shady place, he cannot do better than plant *T. speciosum*. The soil should be broken up deeply, trenched in fact, and if not naturally good, better material must be added. Plant deeply and give a heavy surface mulching of short manure.

CHRYSANTHEMUM FRUTESCENS and its varieties rank amongst the best things for large beds, and would probably be more frequently seen were it not that the stock is often destroyed or so disfigured as to be practically useless by the attack of the leaf-boring fly. This pest, like many others, seems to be locally troublesome, some districts being comparatively free, whilst in others it seems almost impossible to keep clean, healthy foliage. If the stock kept through the winter is clean, the plants may be pinched and potted on, using 4-inch pots. Bi-weekly doses of liquid manure will doubtless be necessary before planting time, as the Paris Daisy is a rapid-rooting and a hungry plant. If there is the slightest sign of the insect (tiny excrescences will be perceptible on the foliage before the maggot begins its boring), clean cuttings should be obtained and the old plants burnt. In addition to their value for the open garden, these Daisies make charming vase plants if pinched in the early stage of growth to keep them well furnished throughout with foliage. One good plant will fill a vase satisfactorily, with Ball of Fire Tropæolum as an edging.

IVY-LEAF PELARGONIUMS.—Although these have been used for flower garden work in an ordinary manner for some length of time, a newer plan is to isolate them as tall specimens on a dwarfer carpet, and those readers who have not already

tried the practice will find that wonderfully pretty beds are the result of such planting. Choose sturdy autumn-struck plants, and shift at once into 4-inch pots, stake with a fairly stout cane 2 feet in length, allow three or four growths to run, and pinch at the top of the cane. The plants early in the summer will form nice little irregular pyramids, and the trailing shoots will also run along the ground and mix with the dwarfer carpet. This may be of tufted Pansies, and as the majority of the Ivies are of soft, quiet colours, there should be little difficulty in getting pleasing contrasts.

**CUPHEA PLATYCENTRA.**—An old-fashioned plant not very often seen in gardens, but holding its own against many things of more modern introduction, dwarf and compact in habit and very free flowering. A very pretty bed can be made by planting thinly alternate clumps of Heliotrope and *Centaurea ragusina*, and filling in the remainder of the bed with the *Cuphea*.

**GAZANIA SPLENDENS.**—Another old-fashioned flower very useful for any situations where the majority of plants are not satisfactory. This is a plant that amply repays a little extra care from the cutting pot. Given nice bushy stuff at planting time, it is one of the quickest growing things we have. E. BURRELL.

Claremont.

#### NOTES ON HARDY PLANTS.

**Sarracenia.**—I daresay that almost one of the first thoughts in connection with these will be their want of hardiness. I fear it is the variability of our climate that tries even the hardier varieties of this singular genus. We often have our intensest frosts without a covering of snow, and, worse still for plants with at least a measure of verdant winter foliage, often the most withering east winds. Doubtless we have yet to learn something about the best means of accommodating these plants out of doors, and should we attain the knowledge of the better treatment, it is reasonable to believe that the plants will be rendered more capable of enduring the winters. I am told that *S. flava* is one of the best plants for landscape effect in its native country. In the South American woods it forms a feature of the landscape, whole acres being covered with the showy yellow leaves 2 feet to 3 feet high. My own experience does not warrant me in saying more at present about the *Sarracenia* than that with proper treatment they are not the slow-rooting things I used to suppose. Given fresh imported roots, with a good sound piece of root-stock and a few leaves in a green state, they root rapidly in moist spongy peat liberally mixed with sand, and all the *Sarracenia* affect a somewhat shady situation. I have at present under trial some four varieties, and if these, which had become nicely established before winter, come safely through with the trifling protection of a handful of Bracken, I shall be delighted, because then I shall see no reason why they should not be planted in telling groups.

**Rhexia virginica.**—I have always treated this suspiciously for hardiness, but I think that a recent test to which a small batch of plants has been subjected fairly justifies one in not merely assuming, but affirming its hardiness. The mode and conditions were that established plants in pots, grown plunged in sand all the summer, were knocked down by the somewhat severe early frosts. The pots were then taken into a cold frame, where a few days ago along with many other things they were frozen solid, with layers of ice between the balls and the pots in the usual way that pot plants are frozen, and in the meantime there had been 22° of frost, and if one deducts 4° or 5° for the higher temperature of a frame compared with the open, we find the tubers of this beautiful Virginian plant enduring 18°. That of course is not so much as we often get, but I consider that roots with their vital parts kept so near the surface, and exposure otherwise as in the case of pot plants, they are more severely tried than open-ground plants, the degrees of cold being equal. I believe this is a point generally

conceded in relation to pot plants. One has, of course, learned to be jealous of the seeming soundness of plants and roots for a considerable time after frost-bite, and we know many instances of plants that may seem sound to the naked eye at their vital parts for weeks after the frost has gone, but were such plants closely scrutinised by the aid of knife and lens, it would soon be seen whether rupture of tissue had occurred. I will only add that in the case of the *Rhexia* it proves sound after careful examination subsequent to the above-described attacks of frost.

**Brachycome Sinclairi.**—A curious bit of experience has accidentally occurred with this plant. It is known that this somewhat rare plant is rather tender, and though as a rare and beautiful plant it merits some care, yet because of its doubtful hardiness it has not here for the last few years received more attention than to have given it the shelter of a cold frame plunged in fibre, and, oddly enough, under these conditions it has lived and sprung up from self-sown seed. The curious experience comes in this way: I thought I would nurse the best plant I had and place it in a cool greenhouse near a slight opening, so as not to lack air or to become over-drawn. During the 25° of frost we have just experienced, immediately around the opening I noticed the plants were frost-bitten this morning, and whilst the *Odontoglossums* seemed no worse for the nip, the foliage of *Brachycome* seems totally destroyed. No doubt the previous warmth of the greenhouse had rendered it more tender, and, likely enough, the extreme pubescence of the plant would make the frost tell with all the more effect. Moral: Had this plant been left in the cold frame as before, it would no doubt, as of yore, proved a flourishing plant in April or May. The above facts are simple, it is true, but who knows the value of facts better, and who could profit more by them than the gardener?

**Soldanellas.**—My own experience is, that though seedlings can be easily raised and grown on to fine-flowering plants in two years, their vigour is not more than that of older plants. In other words, I do not consider these plants should be classed with certain perennials that are known to be better raised every year from seed with the object of keeping up a succession of vigorous young plants. From my experience, may I again repeat, and I ought, perhaps, also to say that here the *Soldanellas* all do well, as it would obviously be misleading to quote test cases of plants where something prevented their flourishing, that very old plants do remarkably well, and present themselves in such a desirable form as no seedlings of two or even three years could. But these results are certainly not had by a "left-alone" treatment exactly. My treatment is to top-dress them liberally with sand and peat or sand and leaf-mould, on the principle that both by the action of frost in winter and the way in which, like other primulaceous plants, the crowns and roots elevate themselves above the surface, so that in time, unless top-dressed, they become dried up and dwindle. Moreover, I believe that if wildings are examined they will be found to be flourishing in those positions where they receive periodically coverings of soil from the higher ground, and anyone can satisfy himself that it is the habit of these humble plants to so elongate their rhizomes or root-stocks, that they must inevitably die did they not by either natural or artificial means receive timely coverings. I am therefore quite sure that anyone will get better results by cultivating into large masses old stock compared with seedlings, though I by no means wish to discourage seed-propagation.

**Campanula valdensis** (Alph. de C.).—To go into the authorities for this name and its place botanically presents one of the instances of authorised confusion, or confusion of authorities. It is shown to be a variety of *linifolia* (of Lam.), while *linifolia* itself is made a variety of *rotundifolia* by Lapeyr. and also by Wahl. Again, it is given as a species (All.), and it has no less than three or four synonyms, which, with all deference

to the authorities, I will not write here. The plant may not be described as a minute form of *caespitosa*, but minutely examined might be imagined to have a near relationship to *pulla* and *Waldsteiniana*. Its flowers, however, are very pale, but so shell-like in substance, as to rattle when dashed in the hand. Though at a glance it might strongly remind one of *pusilla*, closely examined it will be found to be a much more refined Bellwort. It grows but 2 inches or 3 inches high, smothers itself with pale puce bells, and has a moderate habit of spreading at the root. It is one of those sweet little things that one may cram into the loamy seams of a sunny rockery, and that may be repeated almost all over the garden with pleasing effect; or, to put it another way, it is one of those spreading *Campanulas* that one could hardly ever tire of. And did one do so, it is more easily eradicated than some of the deeper rooters. It might be suggested as a pretty carpet or foil for late summer and autumn flowering bulbs, not the earlier ones of spring, because then it is defoliated. Speaking of

**Campanula pusilla**, there are two *Campanulas* of this name, but, fortunately, once known they cannot be mistaken. One is the generally known pretty creeper of Haenk and the other is authorised by Alph. de C. as a variety of *glomerata*, one of our British species.

**Daphne rupestris.**—I have had occasion of late to seek out the authority for this name, and as it did not prove to be one of the most readily found, it may be useful to mention the information I gleaned from the Rev. Mr. Wolley-Dod and other sources. The authority for the name *rupestris* is *Facebias*. The plant is identical with *D. petraea* of Leybold. It would seem that this Tyrolean plant has been added to the flora of Europe within comparatively recent years. It is unnecessary to point out that though two such names as *petraea* and *rupestris* may have synonymous meanings, they may seldom refer to the same plant when used by two different authorities, as they do, however, in this case. If this pigmy shrub has been described, I should be grateful to anyone who would refer me to the description.

**Hypericum balearicum.**—Whether seen in the form of a herbarium specimen or in a living state this species is at once a remarkable and beautiful plant. Until lately I must confess that I had looked on it as considerably wanting in hardiness as an open-air plant for Yorkshire. Latterly, however, in correspondence with a friend, I have received assurances that it may be grown and kept going like several of the common St. John's Worts. I attach much importance to this, because if it should prove hardy, it must be a deeply interesting as well as an attractive plant. We are told in Curtis' "Magazine" that the plant is for hardy greenhouse, but without egotism we may claim to know a little more now-a-days as to the capabilities of old species like the present. Some of the interest about the plant comes in when we study the old name for it of *Clusius*, which, however unfitting from the present-day botanist's point of view, was significant and expressive to a degree, namely, *Myrto-Cistus Pennai*, from "the leaves being somewhat like those of the Myrtle and a gummy substance exuding from the plant as in the *Gum Cistus*." The distinctive beauty of the shrub is seen in the erect and rigid stems of a ruddy colour, which are also, with the yellowish green, lobed, and wrinkled leaves, of a rigid texture, freely beset with warty developments. For the size of the plant, the flowers are large and gay, and altogether a two or three-year-old specimen cannot fail to win admiration. It is very easily propagated by cuttings of the new wood in summer out of doors or at any time in the greenhouse. J. Wood.

Woodrill, Kirkstall.

**Lilium Browni.**—Judging by the splendid bulbs of this Lily sent here by some of the Dutch cultivators, it does well in Holland, and when in flower is certainly very beautiful. The illustration of the typical *L. Browni* (accompanying the

coloured plate of the variety *leucanthum*) on page 97 of THE GARDEN is a very truthful representation of this beautiful Lily, the distinct, long arching foliage being well shown. The variety *odorum* mentioned on the same page is, as a garden plant, inferior to the type, and it is also far more delicate in constitution. This is frequently offered for sale in the London auction rooms during the winter under the name of *Lilium japonicum Colehesteri*, and fine bulbs can at times be obtained at a moderate rate. Very large-sized bulbs from 11 inches to 13 inches in diameter are, I see, offered in the catalogue of one of our large importers, and such as these should yield a good display of bloom. The typical *Lilium Browni* does well in pots, though it is not often seen so treated. When so grown and required for the greenhouse or conservatory it should be kept out-of-doors till the flowers are on the point of expanding, as in a sunny spot the chocolate-tinted exterior is much more pronounced than if it is grown altogether under glass. An especially striking feature of this Lily is the marked contrast between the ivory white of the interior and the deep chocolate-tinted outside of the flower.—H. P.

#### FOLIAGE PLANTS IN WINTER ON THE ROCKERY, &c.

THE articles recently published in THE GARDEN on this subject are most interesting, and it would be quite possible, with the wealth of material we have, to make a most interesting winter garden alone. I have noted the following as desirable for that purpose: *Andromeda tetragona* is distinct in its vivid green; *A. polifolia*, *A. p. major* and *A. p. minor* are charming in their degrees of bronzing, the latter particularly so; *A. calyculata*, of taller growth, is very distinct; while *A. Mariana* still retains many of its richly-coloured leaves. These standing, as they recently did, above the snow had a very quaint appearance. *A. racemosa* retains most of its leaves, and they are almost purple. *Azalea procumbens* is a compact mass of reddish bronze, while *Thymus serpyllum coccineus* is of even a deeper colour. *Frankenia laevis* is the deepest green thing in the garden; this is a most excellent carpeting plant. *Galax aphylla* is beautiful in its various shades of green to red; while *G. a. macrophylla*, with much larger leaves, scarcely changes from green at all. *Aubrieta purpurea aurea variegata*, rich in its yellow margining, is very showy, and as many of its shoots are often entirely yellow, it looks in the distance like a plant in flower. The old and not now often seen *A. p. albo-variegata* is also a very good plant. A good, but much smaller thing is *A. anti-Libani marmorata*. In this the tiny crowded leaves are entirely marbled with white. *Erica carnea* is already a mass of rosy buds, while *Alyssum alpestre* forms closely creeping masses of silver. *Gaultheria procumbens* is well known and excellent in its glossy greenness; while *G. nummularia* is of quite another type of growth; it forms thick masses of rather dull green leaves and russet stems, with here and there leaves of a bronzy tint. *Hepatica acutiloba* has beautifully marbled leaves, quite different to those of *H. triloba*; they are also more prostrate in habit. In damp places *Helonias bullata* is most distinct, rich clumps of luxuriant green changing to bronzy red. *Ledum latifolium compactum* is a mass of old bronze. *Megasea Croesus* is the only one not badly hurt by the frost, while it is the smallest of them all, the leaves not much more than 3 inches across and rich bronze and red. The two *Aciphyllas*, *Colensoi* and *Lyalli*, are very distinct, the former vivid green and the latter a curious rusty grey. *Berberis buxifolia nana* is a good and distinct shrub. The various Heaths are a power in themselves. *Menziesia polifolia* is good, and the distinction in colour between the white and the purple kinds is very marked. *M. empetrifolia* is very distinct. *Cassinia fulvida*, not hurt in the least by the cold, is beautiful in its golden sheen:

while last, but by no means least, *Tellima grandiflora rubra* provides the ruddiest masses in the garden. T. SMITH.

*Newsp.*

## TREES AND SHRUBS.

### SPIRÆA ARLEFOLIA.

THE most graceful of all the Spiræas—*S. arifolia*—is herein depicted, the illustration showing well not only its elegant habit, but also how free-flowering a thriving specimen is. It is one of the largest-growing members of the genus, for it will reach a height of 10 feet to 12 feet, and even more, while the plume-like panicles of creamy white blossoms are at their best, as a rule, towards the latter part of June and in July. As an



*Spiræa arifolia*. Engraved for THE GARDEN from a photograph sent by the Rev. W. J. Gerard, The Rectory, Rathangan, Co. Kildare, Ireland.

isolated specimen it is seen to very great advantage, and just standing out prominently from other shrubs, which serve to form a background, there is no more beautiful picture than is furnished by this Spiræa. It is a native of North-west America, and was introduced into this country in 1827. Though so long known under the name of *S. arifolia*, it is now by the botanical authorities named *S. discolor*. In any selection of the best Spiræas this is undoubtedly entitled to a foremost place. Though its height is as above stated, it will flower well long before it attains these dimensions.

T.

**Rubus australis.**—This has lately been brought before the notice of your readers, and rightly too, as it is such a distinct Bramble that it attracts the notice of all who see it. I should hardly have troubled you to say more in its favour than has been said, but 1893 being such a dry year at this place and the unusual growth this shrub

made showed how much it enjoyed a dry summer. It has been growing here unprotected for many years, planted on a mound and allowed to grow at will between and over rock boulders. During the summer of 1893 it made growths 12 feet long, much longer than usual, showing how much it enjoyed a dry season and situation.—W. O., *Fota*.

**Forsythias under glass.**—The two Forsythias, *F. suspensa* and *F. viridissima*, were grown in our gardens for many years before advantage was taken of their naturally early flowering qualities to furnish the greenhouse. They both readily lend themselves to gentle forcing, and in the greenhouse are very beautiful before winter has left us. Of the two I prefer *F. suspensa*, which is naturally of a loose, rambling style of growth—in fact almost a climber, while *F. viridissima* forms a sturdy-growing free-branched bush. If a plant of *F. suspensa* be secured to a stick and the slender flexible branches allowed to dispose themselves at will, it forms a really graceful specimen, and when all these drooping shoots are studded with yellow blossoms they have the appearance of a shower of gold. *F. viridissima* is under the same treatment very pretty, but it is wanting in the grace and elegance of the other. There are few of our hardy shrubs that can advantageously be employed for so many distinct purposes as *Forsythia suspensa*, for, as above noted, it forces well; then, planted in the open ground and allowed to grow at will, it is very attractive, while for furnishing a wall it is unsurpassed among deciduous subjects. Next, owing to its thorough hardiness, it can be used for covering a fence or any similar purpose where anything at all tender would not stand, for an open fence, owing to the draught through it, does not yield anything like the same amount of protection as a wall. *F. suspensa* is very much given to root at the tips of the branches like a Bramble, so that in the case of a plant standing in the open ground under conditions favourable to the production of roots, a colony of young plants will in time be formed all around it.—T.

**The Maiden-hair Tree.**—*Salisburia adiantifolia*, certainly a more euphonious name than *Ginkgo biloba*, although introduced into this country so far back as 1740, does not seem to have found much favour with planters, a rather remarkable circumstance when we consider that it is an absolutely unique tree. Many exotics resemble in foliage either a fellow foreigner from some other country, and in some instances our own native trees, but this cannot be said of the *Salisburia*. Also it may be claimed in its favour that it is equally as beautiful. The *Umbrella Pine* for instance, also a Japanese tree, is very distinct, but it can hardly be pronounced a beautiful tree. It may, I think, be safely asserted of the *Salisburia* that it is admirably adapted for any site where a deciduous tree of average size is required. It may with advantage find a place in any ornamental planting and should be assigned a prominent position. Attention has been directed to the fact that it is a fine autumn tree, the decaying foliage very clear and pronounced in tint, and it may also be noted that the foliage is retained a considerable time, as many exotic trees, if a sharp early frost comes, are often completely stripped in twenty-four hours. The *Maiden-hair Tree* has the reputation of being of very slow growth for many years in its early stages, a fact I am not able to

personally verify, only having come in contact with established trees. Perhaps any reader who has planted it will kindly give his experience. The specimen here either received a severe check, or had its leader crippled comparatively early in its career. It runs up to a height of 12 feet, with a bole whose diameter does not lessen greatly from the 18 inches measured close to the ground. At this height, however, the thick bole comes abruptly to an end, and half a dozen leaders or perpendicular branches spring from it which form the head of the tree. The height is 38 feet. In general appearance the tree reminds me very much of one of the grand old standard Pears to be found occasionally in south country orchards, save that, never having been touched by knife or saw, there is a density of small growth in the Salisburia that is lacking in the Pears.—E. BURRELL, *Claremont*.

## SOCIETIES AND EXHIBITIONS.

### ROYAL HORTICULTURAL SOCIETY.

MARCH 12.

THE meeting on Tuesday last in the Drill Hall afforded a most singular contrast to that of the previous gathering. On all sides there was a marked increase, notably amongst Orchids, which were by far the most numerous of the exhibits, it being, as it were, a field day for the early-flowering Dendrobies, of which some of the best known kinds were staged, both of hybrids and species. To one of the former a first-class certificate was deservedly awarded. In *Dendrobium Apollo* we have a remarkably fine hybrid of the first rank. Quite in contrast as it were, another and similar award was made to *Sophranitis grandiflora*, an Orchid that has for many years been a general favourite, and no award ever made was more deservedly given; the plant itself was a splendid example of successful cultivation, and for that alone was worthy of note. Another and old favourite was present in *Dendrochilum glumaceum* (syn., *Platyelinis glumacea*), a most profusely flowered specimen. Before the floral committee came several good exhibits, notably that of the new China Rose Duke of York, another Waltham seedling which bids fair to be a most valuable decorative pot Rose both for late autumn and early spring. The plants in question were well flowered, the foliage of medium size and the growth dwarf. Several well-flowered plants of *Camellias* were also contributed, likewise a choice selection of cut blooms. *Hemantus Kalbreyeri* was shown in fine form, proving its utility as an early-flowering bulbous plant of showy character. Of early *Daffodils*, forced, of course, but none the less welcome, there was a good display, and the best forms of the *Snowdrops* were to be seen in good character. The delightfully fragrant *Boronia megastigma* made its first appearance. Some few decorative plants of general character were likewise staged. At this season it could not be expected that any great number of exhibits would come before the fruit committee, but a considerable amount of interest was evinced in a new Strawberry now shown for the first time, one that bids fair to eclipse all other sorts for early forcing both for private consumption and the market also. The fruits are of large size and of good flavour for the season, the growth dwarf and compact, and the cropping qualities excellent. An exhibit of Figs from Syon House proved the value of the variety (St. John) for early forcing, the fruits in question having been part of a very heavy crop from a pot plant.

#### Orchid Committee.

First-class certificates were awarded to—

*SOPHRANITIS GRANDIFLORA*, of which quite a unique plant was shown bearing some five dozen or more of its showy flowers, these being of brilliant colour and large in size. This large healthy mass was growing in a shallow pan. It was first introduced from the Organ Mountains, of

Brazil, in 1837. From Sir Trevor Lawrence's collection.

*DENDROBIUM APOLLO GRANDIFLORUM* (*D. nobile pulcherrimum* × *D. Ainsworthi splendidissimum*).—A remarkably fine hybrid raised between two very superior varieties, with flowers as large as in *D. nobile nobilium*, but more expanded, the sepals and petals being of a deep vinous purple, shading off at the base, the lip tipped with the same bright tint, with a large maroon-purple blotch broadly margined with white, and fully 1½ inches in width, the growth very robust and free. From Mr. James Cypher, Cheltenham.

Awards of merit were voted to—

*DENDROBIUM EPOSUM VIRGINALE*.—A charming hybrid of delicate beauty raised between *D. nobile intermedium* and *D. endocharis*, the latter itself being also a hybrid. The sepals and petals are of a delicate pure white, the lip somewhat elongated, ground colour white with a soft purple blotch, the growth dwarf and compact. From Messrs. J. Veitch and Sons.

*LÆLIO-CATTLEYA MYRA* (*Lælia flava* × *C. Trianae*).—A very distinct and beautiful hybrid, having the habit in a large measure of *L. flava* with the flowers of intermediate size, the sepals and petals of the palest primrose with the labellum of a pale yellow, deeper at the base. In its colour this hybrid stands by itself, having none of the brilliant tints of *C. Trianae*, whilst that of *L. flava* is greatly subdued. From Messrs. J. Veitch and Sons.

*PHAIUS-CALANTHE HERORATA ROSA* (*Calanthe vestita gigantea* × *Phaius grandifolius*).—A hybrid in which the vigour displayed by both of its parents has been greatly reduced, resulting in quite a dwarf growth, but still retaining the characteristics of the latter, the spike also being erect, but with flowers of the form of those of the *Calanthe*; colour a soft rosy pink, very distinct. From Messrs. J. Veitch and Sons.

*CYPRIPEDIUM FOWLERIANUM* (*C. Harrisianum superbum* × *C. bellatulum*).—An extra fine hybrid with broad petals beautifully marked, the dorsal sepal being large and, like the petals, of good form. The lip takes after *C. bellatulum*, but is larger, the colouring throughout dark claret on a lighter ground, the dwarf growth of *C. bellatulum* having given place to the freedom and vigour of *C. Harrisianum*. From Messrs. Sander and Co.

*DENDROBIUM CASIOPE ASHWORTHI* (*D. nobile albidiflorum* × *D. japonicum*).—A very pleasing and distinct form, with pure white wavy sepals and petals. The lip, which is elongated and somewhat narrow, has a pale purple blotch near the throat on a light ground; a choice hybrid. From Mr. E. Ashworth, Harefield Hall, Cheshire.

*CATTLEYA PERUVIALLANA MAGNIFICA*.—One of the very finest forms of this beautiful winter-flowering species, the labellum unusually broad and finely fringed, crimson-purple in colour, deeper at the base, the sepals and petals showing deeper tints also. From Mr. F. Hardy, Ashton-on-Mersey.

Messrs. Sander and Co. had a choice group with a profusion of flower, prominent amongst which was a trio of hybrid *Phaiuses*, each distinct and very beautiful. In all instances *P. tuberosus* was one of the parents, but its somewhat delicate constitution had disappeared under the influence of the other parent in each instance. *Phaius Cooksoni* (named after its raiser) is from *P. Walliehi* and *P. tuberosus*, having flowers of a dark terra-cotta pink, with a richly-marked lip. *P. Marthe* (*P. Blumei* × *P. tuberosus*) has the lightest-coloured flowers, a soft, pale terra-cotta shade with a large lip, finely fringed and veined; and *P. amabilis* (*P. grandifolius* × *P. tuberosus*) is intermediate in colour between the two former, with flowers of large size, the lip being especially handsome in its markings. The last two are both hybrids of the firm's own raising. In the same exhibit were *Maxillaria sanguinea*, with grass-like growth, having the dark flowers nestling near the small bulbs; *Pescatorea Lehmanni*, with one good bloom; *Dendrobium O'Brienianum*, a singular looking species; *Vanda teres alba*, a choice

form bearing three fine blooms, one particularly large; *Dendrobium nobile murrhinianum*, a beautiful form, with transparent flowers flushed with the palest purple; *D. nobile albidiflorum*, a pure white variety with dark maroon blotch on the lip, the purple tints being absent; *D. nobile nobilium*, still the finest variety, with very large richly coloured flowers; *D. Dominionum*, one of the oldest hybrids, showing *D. Linawianum* and *D. nobile* in its parentage. *D. nobile*, a very fine form, with flowers of the shape of those of *D. Wardianum*, but with the colouring of *D. nobile*; *D. Leechianum*, a near ally to, but distinct from *D. Ainsworthi*, being the result of the same cross, and *D. Ainsworthi* were also shown. *Lælia Oweniana*, with creamy white sepals and petals, also lip, save a deep violet-purple margin; *Cyclogyne Sanderiana*, a beautiful dwarf species; *Lycaste Skinneri*, of rich colour; *Cattleya Trianae virginalis*, a charming pure white form of great beauty, and bearing large, massive flowers; *Cypridium miniatum*, distinct in its large dorsal sepal, with broad margin of pure white; *Cattleya albanensis superba*, a species of distinct character; *C. Schilleriana*, one of the finest dwarf species, with broad lip veined with rich velvet-purple, quite in contrast to the bronzy copper-coloured sepals and petals; *Cypridium Crossianum aureum*, a golden form; *C. Youngianum* and its form *superbum*, both fine hybrids, notably the latter, with its handsome drooping sepals, were also included (award silver Flora medal).

Messrs. B. S. Williams and Son had an attractive group, prominent amongst which were several finely-flowered plants of *Cyclogyne cristata alba* with long spikes of bloom. Other good things included the old, but beautiful *Cymbidium Devonianum*; *Lycaste fulvescens*, well flowered, somewhat in the way of *L. lanipes*; *Cypridium Boxallii atratum*, beyond doubt the best form, the dark spots, notably in the dorsal sepal, being the distinctive feature. *C. Chamberlainianum* was shown here in vigorous growth, with richer-coloured flowers than usual. *C. Morganii*, with two spikes bearing three fine blooms on each, stood out prominently. *C. Williamsi*, one of the older hybrids, with *Dendrobium Wardianum* and *Angraecum citratum*, were also included (award silver Banksian medal). Sir Trevor Lawrence showed a most interesting group, comprising fine forms of *Calanthe Regnieri*, as *Stevensi* and *Sanderiana*, both beautiful and distinct. *Dendrobium nobile murrhinianum* was also shown here, also a singular-looking Orchid, *Ornithodium Lawrenceanum*, of scandent growth and with *Maxillaria*-like flowers. *Cypridium Lawrellii*, a fine dark hybrid; *Epiphrontis Veitchei*, a choice hybrid; *Epidendrum Endresii-Wallisi*, another well-known Veitchian hybrid; *Masdevallia Fraseri*, dark crimson, with darker veins; *Sophranitis grandiflora*, already alluded to; *Cochlioda vulcanica grandiflora*, intensely dark in colour; *Spathoglottis Lobbi*, pale yellow, most beautiful; *Eulophiella Elizabethae*, bearing one spike; *Pleurothallis Roezli*, with blackish-looking flowers, singular and distinct; *Phaius Cooksoni*, a good example, and *Dendrobium melanodiscus*, were also shown (silver Banksian medal). Mr. E. Ashworth showed five well-flowered *Dendrobiums*, *D. splendidissimum grandiflorum* being extra fine, with growths fully 4 feet in length, bearing unusually large flowers; *D. Linawianum*, profusely flowered and of good colour; *D. Cassiope* (Ashworth's var.), already noted, and *D. Findleyanum album*, a pure white form with golden blotch on the lip (silver Banksian medal).

Messrs. J. Veitch and Sons showed several of their hybrid Orchids, amongst which was the beautiful *Chysis Cheltoni*, rich in colour and very distinct, the plant bearing a sturdy spike. *Cymbidium eburneo-Lowianum* was again shown and in very fine condition, having as many as six flowers to the spike and these of extra size. *Dendrobium Edithae* (*D. nobile nobilium* × *D. aureum*) is a hybrid that partakes somewhat of *D. splendidissimum*, but has a deeper tint in its flowers. *D. Cybele nobilium* (*D. nobile nobilium* × *D. Findleyanum*) has the colour of the former

parent in the sepals and petals with the form of the latter, more particularly in the lip, which has a dark blotch. *D. Ainsworthi* intertextum is a form with pale creamy white sepals and petals, the dark spot on the lip being surrounded with pale sulphur. *D. splendidissimum* Lecanum was also shown, and likewise *Epidendrum Endresii-Wallisi*, with *Cypripedium lanthe*, a hybrid showing traces of *C. villosum* and *C. Harrisianum*. *C. Sedeni candidulum* was unusually fine and pure in colour, bearing several large blooms. *C. Lathamianum* completed this exhibit, it bearing fine flowers (silver Banksian medal). Messrs. Low and Co. had an effective group consisting of *Dendrobium splendidissimum* and *Odontoglossum Edwardi*, with several lovely examples of *O. Reezii* and *O. Roelzii album*, in the culture of which this firm excels. The plants in question bore very fine flowers. *Cypripedium Chamberlainianum* was also included, also *C. Wm. Lloyd*, a dark hybrid of *C. bellatulum* character. There was also a large plant of *Oncidium macranthum* Lowi bearing a number of flowers, as well as *Lalia harpophylla* and *Dendrobium Barberianum* with *Cattleya Trianae* (silver Banksian medal).

Of other and smaller exhibits the following are the chief: From Mr. Hamar Bass, M.P., came three well-flowered healthy plants of *Eulophiella Elizabetha*, bearing fine spikes of bloom, pearly-white and of wax-like substance, with a tint of rosy-purple on the reverse of the petals, more pronounced on the flower-stems. There were as many as eighteen flowers and buds on the spike in one instance, half of which were expanded, the three plants bearing four spikes. Mr. Cypher had *Dendrobium Ainsworthi*, Cypher's var. (*D. nobile elegans* × *D. aureum*), with much larger blooms than in the original hybrid, these being of a deeper tint, with a very robust growth. From Baron Schroder's collection came a grand spike of *Odontoglossum crispum nobiliss*, a very superior and richly marked form. *O. luteo-purpureum* and *O. Andersonianum* were both staged in fine condition, one variety of the latter being a superb form. *Dendrobium nobile Ballantianum*, a very choice and distinct form, with other good things was also included. Mr. Cobb showed *Dendrobium Schroderianum* (Dulcote var.) with bright purple flowers; also *Phaius Cooksoni*, bearing a very robust spike of nine flowers and buds.

Sir F. Wigan showed a grand specimen of *Platyclinis glumacea* with several dozen of graceful drooping spikes of its small, but fragrant blossoms—a fine cultural example; also a hybrid *Cypripedium* of distinct features. From Mr. Ingram, Elstead House, Godalming, came *Cypripedium Refulgence* (*C. Curtisi* × *C. hirsutissimum*), which showed the preponderating influence of the latter parent; and from Mr. J. Gurney-Fowler came some very superior forms of *Cattleya Trianae*, notably a dark variety with a rich velvety crimson lip. Mr. Hollington, Forty Hill, Enfield, showed one of his hybrid *Cypripediums* named *Ruth Ayling*, a cross between *C. niveum* and *C. Argus*. Mr. Thomas Statter had *Dendrobium splendidissimum* Lecanum in good condition, also cut blooms very fine in colour of *D. nobile nobiliss*, as well as *Cypripedium Phioe* (*C. levigatum* × *C. bellatulum*), the latter parent being most in evidence, and another very dark hybrid called *C. atrobens* bearing a twin-flowered spike. Mr. Craven, Ashlea, Ashton-on-Mersey, had a very fine example of *Dendrobium Wardianum albiflorum* of extra vigour, one bulb being at least 5 feet long and well flowered. Mr. Fred. Hardy showed *Cymbidium eburneo-Lowianum giganteum*, a markedly superior form of this unique hybrid, showing also great vigour of growth. *D. splendidissimum* Lecanum was also shown here, also another hybrid *Dendrobe* between *D. nobile* and *D. Findleyanum*, showing much of the latter. Two good examples of *Odontoglossums* were also included, each with a long spike. From Mr. Forster Alcock came *Cypripedium Harrisianum*, *Brassia Martiana*, and *Dendrobium undulatum*. A small group was staged by Mr. McArthur, of Maida Vale, composed of *Dendro-*

*biums*, *Cypripediums* and *Odontoglossums* in season. Mr. Lucas, Warnham Court, had very fine and long spikes of *Dendrobium undulatum*, a beautiful species with flowers of old gold colour. To this a botanical certificate was awarded, it being also included in Mr. Forster Alcock's exhibit. Mr. Lucas also received the same award for *Celogyne sparsa*, a small-growing but very pretty species in the way of, but dwarfer than *C. ocellata*. *Cochlioda vulcanica* (Warnham Court var.) was represented by a healthy plant bearing two spikes of large, deeply-coloured blossoms. Mr. Barton, Highfield, Wilmslow, sent a very fine spike of *Phaius tuberosus* with five large blooms.

#### Floral Committee.

Awards of merit were given to the following:—

**AMARYLLIS PRINCE EDWARD.**—This is a very fine kind, having a bold, well-formed flower of a deep crimson colour, shading to dark red in the throat. The green shading in the throat of the flower, which is more or less prominent in most varieties, was not visible. Exhibited by Messrs. Veitch and Sons.

**AMARYLLIS MRS. MONTEFIORE.**—This has an immense flower of fine form, the colour white, with slight feathered shadings of pale red down the centres of the petals. This also came from Messrs. J. Veitch and Sons.

**VIOLET PRINCESS BEATRICE.**—This handsome Violet is evidently possessed of great vigour, the flower large, well shaped, and borne upon a long stout spike. The colour is of a rather light shade. The scent did not appear to be very powerful. Exhibited by Mr. G. Nobb, Royal Gardens, Osborne.

**EUCARIS STEVENS.**—This, figured and described in THE GARDEN, August 11, 1894, is very free flowering, some of the plants in the group shown being merely single bulbs in small pots, but carrying a noble spike of flowers. Exhibited by Mr. P. Blair, The Gardens, Trentham.

**AZALEA JOHN WEATHERS.**—This, one of the Ghent varieties, has bold trusses of large flowers, the colour a soft shade of rosy-pink and orange. Exhibited by Mr. J. Fitt, Panshanger Gardens, Herts.

Messrs. William Paul and Son, of Waltham Cross, Herts, exhibited a group of *Camellias* in pots, and *Rose Duke of York* also in pots. The *Camellias* were medium sized, freely-flowered specimens of most of the older kinds. They also showed six boxes of cut *Camellias*, the flowers fresh and fine in colour. A large basket of *Clematis indivisa lobata* formed the centre of the group, the plants perfect wreaths of bloom. A silver-gilt Flora medal was awarded. Messrs. Barr and Son had a group of cut *Daffodils*, but there was no competition for the prizes offered for this flower. In the group staged *Emperor and Empress* were very fine, showing how admirably they are adapted for pot culture; whilst of older kinds, *ringlobus* and *Tenby* among trumpets, *poeticus ornatus*, *Burbidgei* and *Cynosure* of the star-flowered kinds made an effective group with *Anemone fulgens* as a margin. Messrs. Barr also sent a handsome lot of *Galanthus Elwesi* and its variety *marginatus*, which has very long stems and a fine flower. *Iris reticulata* and *Scilla bifolia* flowering in pots were also shown (silver Banksian medal). *Iris reticulata Krelagei* was shown in magnificent form and in quantity by Messrs. J. Veitch and Sons, the exhibit receiving a silver Banksian medal. This variety is very distinct in colour from the type and a gem among the early Irises. A group of miscellaneous plants from Messrs. J. Peed and Sons, Norwood, consisted mostly of greenhouse subjects such as *Cytisus*, *Erietas*, *Cinerarias*, and plants in flower of the fine white *Lilac Marie Legrave* and *Staphylea eoleiaca*. A silver Banksian medal was awarded. *Shortia galacifolia*, exhibited by Mr. Cornish, gardener to Lady Bowman, Jollywynds, Dorking, was given a cultural commendation, the specimen a magnificent one. Seedling blue *Primroses* were also shown. Messrs. Veitch sent a group of *Amaryllis* containing some noble kinds, besides those to which awards were made,

especially notable being *Elatior* and *Albrastus*, rich deep reds. A fine Violet named *Victoria* was shown by Mr. Jennings, Ascott Gardens, Leighton Buzzard; and Mr. G. Bolas, of Hopton Hall Gardens, Wirksworth, sent *Daffodils* effectively arranged among coloured Ivy leaves on a board for table decoration. Messrs. Paul and Son, Cheshunt, exhibited flowering plants in pots of the single *Rose Carmine Pillar*, which was figured in THE GARDEN, October 27, 1894. It is remarkably free-blooming, producing flowers from every bud along the shoots. The large-flowered variety of the Japanese *Rosa multiflora* (*Polyantha*) was also sent. A new break in the large-flowered race of *Cannas* was shown by the same exhibitors, the variety named *Dr. Masters* having yellow flowers, with a feathered band of red down the centre of the petals. Such varieties will hardly be as effective and distinct as the self-coloured kinds, of which several cut spikes were shown. A vase of large flowers of the common *Arum Lily* and a twin-flowered spathe came from Mr. Fitt, Panshanger Gardens, and cut flowers of *Strelitzia Reginae*, *Aristolochia Westlandi*, and *Rhododendron barbatum* were sent by Mr. Moore, Botanic Gardens, Glasnevin. *Boronia megastigma*, of which a good basket came from Mr. B. S. Williams, is a sweet, quaintly coloured greenhouse plant of the early spring. Its slender sprays are admirable for cutting, lasting fresh for a long time.

#### Fruit Committee.

A first-class certificate was awarded to—

**STRAWBERRY STEVENS' WONDER.**—This was remarkably fine for so early in the season, gathered fruit and also plants in fruit being shown. The plants in 6-inch pots carried from fifteen to twenty fruits in all stages. Some of the fruits, of a pale red colour, are conical, others wedge-shaped. The leaves are very small, similar to those of *V. H. de Thury*, but the fruit is quite distinct in colour and flavour and much larger. This Strawberry was much admired. From Mr. Stevens, Clayton Nursery, Hassocks.

Mr. G. Wythes sent from Syon Gardens St. John's Fig gathered from plants in small pots. This is a very useful variety for early forcing, as it bears freely and the fruit is of good flavour.

In the absence of the lecturer, the assistant secretary read Mr. Collenette's paper on the "Diseases of Tomatoes." In Guernsey no less than 1500 persons are employed in the production of Tomatoes, Grapes, and Melons. The Tomato crop was the most important and was grown in two ways, under glass with heat and without. The Tomato houses were mostly 120 yards long and 30 feet wide, and in many cases were not built in the best possible manner as regards favourable conditions to growth. The aspect was not always favourable, and the culture of the plants was carried out under difficulties. For instance, the soil was not nearly so good as in Jersey, the soil of Guernsey being a yellow clay and containing little plant food. In Guernsey many growers suffered losses of from £100 to £200 in Tomatoes alone in one season. The worst disease Guernsey growers had to contend with was what they termed the sleep disease, and the one most fatal to the plants. At first the plants present a dull appearance, then droop. After this there is a complete stoppage of growth, the fruits formed are allowed to ripen, and many growers reserve the best fruits for seed. This he considered most unwise, as the disease was propagated in this way. He had gone to much trouble to test the growth of plants from diseased parents. By using a strong microscope he had traced the germs of disease in the seed. He thought it most important not to save seed from such plants, as it was impossible for plants in any way attacked by bacteria to make free growth in their early stages. To prevent this disease he advised the use of pots, as the roots could be better managed in this way. A most troublesome pest was the eel-worm, which attacks the fibrous roots, producing root galls. The best

remedy he knew was an American one, viz., thoroughly freezing the soil before planting. In Guernsey this could not be done, but it could in England. They applied lime, sulphate of iron, and seaweed. Yellow blight is also very troublesome, but can be got rid of by keeping the plants drier with more air and withholding water. In the case of a disease called black stripe he advised the removal of all affected plants. This he considered a local disease. He strongly advised disease-resisting varieties, paying more attention to pure soil and thus keeping clear of minor diseases.

Mr. A. Dean thought Tomato plants were kept too much confined; more air was necessary and a humid atmosphere was harmful. Mr. Douglas said he never had disease in his Tomato houses. This he attributed to making the soil firm, never using any artificial manures, and at all times maintaining a dry atmosphere during growth.

#### THE UNITED HORTICULTURAL BENEFIT AND PROVIDENT SOCIETY.

THE 29th annual meeting of this society was held on Monday last, Mr. Geo. Gordon (*Gardeners' Magazine*) in the chair. The meeting was well attended and great interest was evinced by the members in the proceedings. The report of the past year is of a most satisfactory character, encouraging both to the officers and every individual member. Seventy-two new members joined the society during the year, nineteen lapsed, and six died. Since the close of the year, however, there has been a most marked increase in members (*i.e.*, since January last). The membership now stands at 547. The sick pay has been more than in the previous year, £117 having been disbursed to twenty-eight members. Some of these have also received assistance from the benevolent and convalescent funds. Each of these funds is kept distinct and is worked independently. The amounts, as per ledger, due to each deceased member have been paid to their nominees. Subscriptions to the amount of £821 odd have been paid into the benefit fund during the past year exclusive of arrears. The benevolent fund has been increased by £59, the convalescent fund by £66, and the management by £58, irrespective in each instance of the arrears and of the interest of lapsed members to the management fund. The honorary members' subscriptions, including life members, amount to £65. Dividends on investments have produced £267. The entire receipts for the year—with the balance in hands of treasurer at the previous audit—amount to £1456, out of which £1000 has been invested in Corporation and other trustees' stocks for the sum of £1052, all these stocks being now at a premium. The total disbursements in sickness, in death and from the benevolent and convalescent funds—including also the management expenses—have been £267, which amount is itself covered by the interest of invested moneys as nearly as possible, leaving the balance in the hands of the treasurer. This result of the year's working cannot but be satisfactory, and it should result, as the executive trust it will do, in a considerable accession of members. Some gardeners with limited means are postponing the time of their decision in this matter, but surely they should seriously consider their position and interests, resolving if possible to join at once, and thus be able to provide for the rainy day in a more efficient manner. Young gardeners are particularly advised to become members, and thus in early life lay up a good deposit balance to their credit against sickness, infirmity, and old age. Mr. Gordon, as chairman, pointed out all of these benefits in the clearest and fullest manner possible, urging all the members present to do their utmost to get additions to the numbers at every opportunity. He also stated, after a thorough investigation of the books of the society, how well satisfied he was with the way in which the accounts were kept. He also instanced comparisons which had come under his own personal observation of

the benefits accruing to members of our large mixed societies as contrasted with those offered to members of the United, showing in a clear and effective manner the advantages that will accrue to a gardener who joins his own society.

The chairman at the close of the meeting was thanked most unanimously for his services, as were all the officers of the society. The special general meeting was then called, when Mr. Gordon again presided. This was to consider and sanction the increase of sick pay from 10s. to 12s. on the lower scale and from 16s. to 18s. on the higher scale without any additional sum being paid in contributions by the members. It was resolved that these additional benefits be given subject to the sanction of the Registrar of Friendly Societies, to whom the matter must now be referred. The proposal to make this increase was made by the treasurer after the matter had been fully discussed in committee at several meetings during the past year. This increase should be an additional inducement to those who still remain outside the benefits of the society for them to join at once and thus reap the benefits offered.

#### MR. SAMUEL PARSONS ON BEDDING PLANTS.

MR. SAMUEL PARSONS, JUNIOR, has an interesting article in *Scribner's* on this subject, which deserves attention for the good sense that is in it as well as certain other things which deserve a few words. He defends the system, but the illustrations of his paper do not show a trace of true bedding-out, the beds and masses being bold, varied and graceful, and much aided by the picturesque effect of plants in water in Union Square. In water, plants taking to a great extent their own shape and disposition give us a beautiful effect. Mr. Parsons calls bedding the "poor man's system," and says the plants cost but a few pence each; but that is not the case. The beautiful "poor man's garden" here is generally a garden in which the plants cost nothing, however beautiful many of them are. But to say that a system of the plants which he confesses die absolutely every autumn is a "poor man's system" is surely straining a point. When we come to arrange any flowers in artistic ways there is an end to the question. Mr. Parsons does not take note of the fact that at first it was not a question of the Palms or elegant Cannas, but of hard lines and flowers, which one has not very far to travel to see yet in England. In America, owing to the fine summer heat, fine-leaved plants acquire great freedom of growth, which helps the gardener very much; but, after all is said and done, and assuming that plants treated artistically are all of the same value, how about the stock dying in the autumn? Is it not possible in such a climate to have a great number of things that do not perish in the autumn while keeping on to the best of the flowers that live a summer only? It certainly is in our country. It is all very well to talk of putting out half a million of bedding plants, but we should like to see these supported by several millions of plants that may be allowed to remain a few years in possession of their holdings, and so lessen a bit the dreadful and ugly labour of planting the garden when it should be in all the early flush of its summer beauty. Mr. Parsons

does not say a word about the wonderful results of bedding out obtained in the great western cities, such as Chicago, of which we see such unpleasant evidence in some American gardening papers; and not a word of the Italian pastrycook who became a distinguished gardener in Chicago and carried out in bedding his latest ideas of pastry. The real article flourishes in Chicago—at least we have this evidence in Mr. Falconer's paper and in others. We should like to hear what the superintendent of the Central Park thinks of the figure of the globe in carpet bedding built up in the centre of scaffolding and wirework to get a hold for the wretched plants doomed to such degradation.

#### NOTES OF THE WEEK.

**Allium neapolitanum** and **Anemone fulgens** make an effective group in the greenhouse at Kew and show the value of hardy things grown in this way and brought into flower in advance of those outside. They are more beautiful by far than many of the ordinary occupants of greenhouses.

**Rose Duke of York.**—This, one of the latest additions to the sweet, ever-blooming class of Monthly Roses, was well shown on Tuesday by Messrs. W. Paul and Son. Plants in pots were bearing many flowers, which, although produced at this sunless time, showed much of the characteristic variation in colour peculiar to the kind.

**Snowdrop Cassaba.**—This will no doubt become a very popular Snowdrop in gardens. At Kew it is classed as a variety of *Elwesi*, but it is very distinct in many ways, the fine large flowers having stems of considerable length and of a decidedly pale yellow colour. The leaves, too, are long and broad. Established groups in their second year show marked improvement as compared with newly-collected bulbs.

**Shortia galacifolia.**—The very fine specimen of this exhibited at the Drill Hall on Tuesday by Mr. Cornish, gardener to Lady Bowman, Jollywinds, Dorking, attracted some attention. The plant, growing in a wide shallow pot, was very luxuriant and profusely flowered. It had about forty spikes of bloom, many of them being twin-flowered. In leafage as well this is a beautiful plant. A coloured plate of it appeared in *THE GARDEN* of August 30, 1890.

**Phillyrea Vilmoriniana.**—This handsome shrub is one of the few evergreens that have passed through the recent severe winter without being damaged. It has stood 22 of frost at Exeter without showing the least sign of the continuous severe weather. The large deep green leaves look as fresh as they did at midsummer, while all around them the wholesale slaughter wrought among other so-called hardy shrubs is only too painfully evident.—M.

**Pentapterygium (Vaccinium) serpens.**—This Himalayan plant is now flowering at Kew. Its shoots, which are several feet in length, rise from a thick fleshy rootstock, and break into several branches at their tips. They are like those of the *Pernettya*, but the main stem is leafless. The flowers, however, are produced in great profusion down to nearly the base of the plant. They hang singly and in pairs from under the shoots, producing a graceful and brilliant effect; the colour a bright coral-red.

**Snowdrops at Kew.**—These are very pretty now flowering in the Grass, as at Kew. This way of adorning large areas of turf with the earliest of spring bulbs will give our public parks and gardens a new interest, and add greatly to the delight of those who visit them. With bulbs so cheap there is every inducement to plant them liberally, and even if they have to be renewed at

times, the gain in beauty is immense. The beauty of the flowers springing out of the fresh turf is preserved to the end.

**Olearia Haasti as a seaside shrub.**—Many of your readers have spoken well of this deservedly popular shrub. The severe winter did not affect it in the least, and over 20 of frost have not altered its appearance. At Penzance, where a few months ago furious gales raged with such violence that a portion of the esplanade was washed away, and the salt spray from Mount's Bay was carried over the house-tops and deluged the gardens, *Olearia Haasti* was one of the few shrubs that withstood the salt spray, and can therefore be highly recommended as a seaside plant.—M.

**Primula verticillata.**—It is a pity that this lovely *Primula* is not hardy outdoors, but as a greenhouse plant it is decidedly pretty, coming into flower early and lasting a considerable time. There are some groups of it now in bloom in the greenhouse at Kew. The pots each contain three plants. Single plants in pots of the same size will grow larger in leaf and throw up stout spikes of bloom. Seedling plants with single crowns and one flower-spike are always the best, and if the pots they grow in are stood in pans and watered from them there is no soiling of the leaves, which add so much to the beauty of the plant. The flowers are very numerous, of a clear yellow colour, disposed gracefully in whorls. They are also sweet-scented.

**The Charles Collins fund.**—The executive beg leave to tender their sincere thanks to those who have so generously responded to their appeal for subscriptions to the above fund, and to say that they propose to close the latter on Wednesday, March 20, after which immediate steps will be taken to decide as to the most appropriate manner of administering the same for the benefit of the widow and children. In the meantime they would feel exceedingly obliged if those who kindly promised to contribute to the fund would be good enough to remit the amount of their subscription to the honorary treasurer, Mr. George Gordon, Endsleigh, Priory Park, Kew, or to the undersigned, on or before March 20, in order that the fund may be finally closed by that date. The total amount received or promised up to date is £62 19s. J. W. Sanders, honorary secretary, 57, Cressingham Road, Lewisham.

**Cœlogyne at Minchinhampton.**—I do not think that amongst the many species of *Oreohids* which are and will be in flower from now onward till well into the early summer months there are any which can surpass *Cœlogyne cristata* and its varieties; certainly there are few which can equal them as decorative plants. Mr. Wilkinson, the gardener at Highlands, has for many years been noted for the fine specimens he grows. This year they are exceptionally good. I had the pleasure of seeing them the other day when in the neighbourhood. They were arranged on one side of an intermediate *Oreohid* house and presented a sheet of snowy white. Amongst them were fine specimens of the Chatsworth variety (true) *Lemoniana*, a magnificent specimen, but not quite out, and a distinct form with broad foliage, the flowers large, pure white, with a soft yellow throat and very broad petals. This plant is said to be distinct from the Chatsworth variety and much better. When in the bud state the outside of the flower is quite white, while that of *Lemoniana*, *cristata*, &c., is brown.—T. A.

**Phaius Blumei var. Bernaysi.**—This is an *Oreohid* of exceptional interest and rarity, and it is now represented by a fine plant bearing two flower-spikes in the *Oreohid* house at Kew. In habit, foliage and structure of flower it has a close affinity with the well-known *P. grandifolius*. Indeed, *P. Blumei* as well as *P. Walliichi* and *P. bicolor* are by some authorities looked upon as forms of *P. grandifolius*. In colour of flower, however, no *Oreohid* in this group has much resemblance to this variety *Bernaysi*, the entire flower being of a soft, beautiful shade of creamy yellow in front, with the exception of the apex of the lip, which, like the back of the sepals and petals, is

almost pure white. The flower-spikes are 3 feet high, backed by leaves as large as those of *P. grandifolius*. It is, in my opinion, the most beautiful of this section of *Phaius*, which in a wild state is spread largely over the far East. *P. Blumei* itself is found in Java, but the variety under notice belongs to the Australasian region. The particular plant at Kew came from Fiji, but it has previously been collected in Queensland. It is named in honour of Mr. Bernays, a promoter of the Acclimatisation Society of that colony.—B.

**Glass insurance against hail.**—The Nurserymen, Market Gardeners, and Hailstorm Insurance Corporation, Ltd., have issued their prospectus. The corporation came into existence on February 27 with a capital of £100,000. The main feature of the corporation is that it will be carried on for the mutual benefit of the trade, the surplus profits being returned to the shareholders by way of dividend. It seems a very useful corporation with distinct aims, and it has the support of some of the men most practically interested in the trade. It is a very good idea, and no doubt will succeed. The chairman of the corporation is Mr. Harry J. Veitch, and the list of names of directors comprises some of the principal members of the trade. Mr. Alexander James Monro is the general manager and secretary *pro tem.*, and the corporation has registered offices at 1 and 2, King Street, Covent Garden, W.C.

**Notospartium Carmichaeliae.**—Some time ago this beautiful pink Broom of New Zealand was illustrated in THE GARDEN from a photograph sent by Messrs. Veitch, of Exeter, in whose grounds it had bloomed abundantly. The present severe winter has brought to light the curious fact that this New Zealand species (of whose hardiness great doubts were entertained at first) is really hardier than our common native Broom (*Cytisus scoparius*). Two handsome specimens of the pink Broom planted in Exeter do not show the slightest trace of the exceptionally severe frost, while the shoots of the common Broom are perfectly black, and many Laurels, *Laurustinus*, *Euonymus*, and other shrubs generally considered perfectly hardy are nipped so severely, that in some instances not a single green leaf is visible. This certainly proves the hardiness of *Notospartium Carmichaeliae*, which no doubt will soon become popular.—F. W. M.

—The pink Broom of New Zealand is evidently very hardy. It is quite untouched by a frost that has blackened the common Broom and cut the Furze down to the ground. It is a graceful and pretty thing as yet not very well known, but the fact that it is so hardy is a great point in its favour.—STUSSER.

**Strawberry Stevens' Wonder.**—At the Clayton nurseries, Hassocks, Mr. J. Stevens is growing this largely. It was shown at the R.H.S. on Tuesday, and given a first-class certificate. There is now to be seen a batch of 4000 plants in flower and fruit, the majority of them in the latter state, and therefore affording ample evidence of its worth. Whatever may be the ultimate result of testing it in the open air beside the best kinds now grown, there can be no doubt as to its value for forcing. The long double rows of plants on shelves extending the whole length of the houses, with heavy clusters of ripe fruit hanging over the edges of the pots, showed its value. There was scarcely a bad plant to be seen throughout the entire batch. This Strawberry has now been grown by Mr. Stevens for about seven years, the stock having been raised from one plant given to him by a friend, who told him it was a seedling. At first, whilst this kind was scarce, he grew *La Grosse Sucrée* as well in pots, but observing the marked superiority of the seedling plant in free setting and early ripening, the older sort was discarded. A striking characteristic of this new kind is the short-stalked, tufted, compact growth of the leafage, a most desirable thing in a pot Strawberry. It fruits freely and sets well. Upon one truss sixteen fruits were counted all swelling away. A number of fruits weighing 1½ ozs. each

had been already gathered and fruits of 1½ ozs. each were abundant. The colour of the fruit is a light red and the flesh is remarkably firm and solid, so that the fruits travel well. The flavour, too, was good, especially taking into consideration the sunless time that has prevailed. The first fruits were gathered on February 6, and up to the time of my visit (March 2) over 90 lbs. of marketable fruit had been gathered. Another distinctive feature of the kind was a decided tendency to successional blooming even upon plants that were then carrying a heavy crop of ripe and ripening fruit. Fully sixty per cent. of those in fruit were sending up trusses of flowers which doubtless will give a second crop sufficient in quantity to repay the attention necessary to bring it to perfection.—A. H.

**The weather in West Herts.**—The temperatures have been variable, but on the whole there has been a gradual rise in temperature since the beginning of the month. On two days during the past week the highest shade temperature was about 50°, and on the 11th inst. it rose to 52°. On no night did the exposed thermometer show more than 10° of frost. At 1 foot deep the temperature of the ground stood at about the freezing point until the 3rd inst., but since then it has risen 7°. It now stands at 39°, or a degree colder than the March average for the previous nine years, and 4° colder than on the same date last year. Rain or snow has fallen on eight days this month, but to the total depth of only about half an inch. A selected bush of the wild Hazel first opened one of its fertile flowers on the 12th inst., which is a month later than its average date for the previous four years. *Crocus Imperati* first flowered in my garden on the 11th inst., or fifty-one days later than in 1894.—E. M., *Berkhamsted*.

#### RAINFALL IN 1894.

##### HAREFIELD PARK, UXBRIDGE.

Month.	Total depth.	Greatest fall in		Number of days on which 61 or more fell.
		24 hours.	Date.	
Jan.	2.65	.48	9	13
Feb.	1.89	.53	17	15
March	1.72	.52	14	10
April	1.70	.27	24	14
May	1.40	.28	29	10
June	2.04	.47	4	13
July	3.00	.83	10	18
Aug.	2.96	1.01	25	17
Sept.	1.92	.53	22	10
Oct.	4.21	1.15	29	20
Nov.	4.80	1.28	14	16
Dec.	2.96	.75	14	13
Total ...	30.35			169

—W. BATCHELOR.

**Flowers from the Scilly Islands.**—About 4½ tons of Scilly flowers were despatched from Penzance lately for the London and midland markets. This is only about a quarter of the quantity which was being sent about the same time last year.—*Western Morning News*.

**Stocks for Vines.**—Will any reader of THE GARDEN inform me what is the best stock to graft the following Vines on: Muscat Hamburgh, Madresfield Court, Gros Colman, and Gros Guillaume? Though much has been written about this question, I am not quite sure which is the best stock for each kind.—R. KATZER.

**Erratum** ("Supporting Hyacinth Spikes," p. 158).—For "wire gauze" read "a wire gauge."

**Names of plants.**—*Mrs. Towler*.—*Usnea barbata*.—*W. Andrews*.—2, *Acacia longifolia*; 3, *Acacia falcata*.—*E. S. S.*—1, 2, 3, all ordinary forms of *Dendrobium Wardianum*; 4, ordinary form of *Cœlogyne cristata*; 5, *Dendrobium nobile*.—*James Davidson*.—*Masdevallia tridactylites*.

**The Wild Garden:** or, the Naturalisation and Natural Grouping of Hardy Exotic Plants, with a chapter on the Garden of British Wild Flowers. Fourth edition, with wood engravings from drawings by Alfred Parsons revised and enlarged. Teny 8vo, linen cloth. Price 12s.; well bound in half morocco, 15s. Through all book-sellers.



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"This is an Art  
Which does mend Nature: change it rather; but  
THE ART ITSELF IS NATURE."—*Shakespeare.*

## ORCHARD AND FRUIT GARDEN.

## GRAPES FAILING TO SET.

WE frequently see instructions how to treat Vines in flower to ensure a good set, and correct temperatures are given for the Vines during such a critical period. Although such advice is followed out, we sometimes fail to see even a moderately good set, and the grower is puzzled to account for his non-success, as he is perfectly sure that his methods have been correct, as proved by his own past experience and also by the writings of other practical men. There can be no question the instructions given are reliable, but there are local causes that are apt to upset the most skilful efforts to secure a good set, and which are accountable in a great measure for the failure. If the roots are in an unhealthy state or beyond the control of the cultivator, the difficulty becomes greater, and no skill on the grower's part can ensure a perfect set. The only remedy is to wait until autumn and to then bring the roots near the surface in a new border. On some soils Vine roots may travel at will for almost any distance without any bad results, but such soils are somewhat rare. Another cause of a bad set is mistaken kindness on the grower's part. With a very laudable desire to produce Grapes of extraordinary merit, he gives strong applications of manure in a liquid or solid form (it may, perhaps, be natural or chemical manure, or both together) just prior to the bunches coming into flower, thinking that he will assist the Vines by a heavy dose of plant food to set the crop well. No greater mistake could be made with manures at that season, particularly if the borders are inclined to be heavy, as immediately previous to the bunches coming into bloom the new roots just formed are very sensitive, and strong applications of plant food are very liable to burn or injure the points or feeding ends of the roots, thus defeating the aim of the grower, as an imperfect set is practically certain. Another factor that is not always recognised is dry places in the border. It may be that the soil near the hot-water pipes is dry for a considerable depth, in spite of apparent moistness through syringing or damping down, but it stands to reason that the continual heat from the pipes causes a greater evaporation than what takes place further away. Inequalities on the surface of the border also will cause some spots to be much drier than others; consequently, root-action is not so healthy and free as it should be. It will perhaps be said that if a thorough soaking is given when watering, the whole border would be moistened uniformly by gravitation, no matter how uneven the surface was; but actual experience has proved the contrary. On several occasions I have had to assist in or make alterations in Vine and other borders under glass, and have found some parts as dry as dust and others very wet in the same border, although no difference could be detected on the surface. In such instances it has been astonishing that any Grapes ever set at all. If moles or rats get burrowing in the borders, channels are made by them, through which the water runs, leaving portions of the soil perfectly dry; not only so, but they will eat roots through that are in their way and inflict injury on the Vines, causing a bad set,

weakness, or inferior Grapes. I had a strong proof of this in our Black Alicante house three years ago, as the moles got into one end when the Vines had made a few inches of growth. The end Vine in particular indicated distress by growth ceasing and the leaves flagging by sun heat, and before all the moles could be caught sufficient damage had been done to produce a poor set and smaller leaves than on other Vines the roots of which had not been injured.

With the roots near the surface and in a thoroughly healthy condition, and cultural details correctly carried out, temperature has not so much power to ensure a perfect set as often stated, or rather it is unnecessary to take so much pains to maintain it above a fixed point. As an instance of that I may mention that one year, through no fault, I could not keep a night temperature of more than 45° in the Muscat house all the time the Vines were in bloom. The days were certainly bright and favourable, yet in spite of the fall in temperature at night I had the best set Muscats I ever had, most of the berries having four stones and each bunch required liberal thinning. At the same time I do not advise a low temperature, rather the reverse; the object is to have the roots in the right state, for on that hinges success.

W. G. C.

**Colour in Apples.**—Generally we do not expect to see much colour upon fruit of Wellington. I lately saw some fruits gathered from trees in Mr. Perkins' garden at Portswood, Southampton, which were, I may say, most brilliantly coloured, reminding one almost of Worcester Pearmain, so bright was the skin. From the gardener, Mr. Miles, I learnt that many trees of this Apple are growing in standard form on grass and all succeed capitally. Mr. Miles has been experimenting upon several of the trees with a view to increasing the colour of the fruit. Judging from the specimens inspected, he has succeeded in a remarkable degree. Fruit from trees of the same variety not treated in the same manner is pale or of the usual colour, which to me is an absolute proof that the colouring of Apples is influenced by the constituent portions of the soil in which the roots subsist. At the same time I do not infer that the soil is wholly the cause of such deep colouring as may be obtained. In the present instance, as in all others where good or highly coloured Apples are obtained, the fruit is not hidden by foliage caused by a thicket of branches. The trees in question are twenty-six years old, trained and managed at the present time as freely-grown standards, but not closely pruned. Sulphate of iron and soot are the chemical agents employed with such satisfactory results. The sulphate of iron was sprinkled upon the grass which is growing underneath the trees freely during showery weather when the fruit was about half its full size. Soot is scattered over the surface several times during the year in the same manner. To the influence of soot upon the roots of the trees Mr. Miles attaches much importance as a colouring agent, and, from the specimens seen of the Apple in question, with very good reason. Although the Wellington succeeds so well in certain parts, it is an utter failure in others. Here in our cold soil a standard tree has not given a satisfactory crop since it was planted fifteen years since, although it has grown well.—E. M., *Bishop's Waltham.*

**Rivers' Early Nectarine.**—I was pleased to see the note at page 111 on this new fruit and trust that we have secured a Nectarine some three or four weeks in advance of Lord Napier, as described by "Wiltshire Gardener." In a month or two this fruit will be proved, as doubtless many fruit growers have their new stock in fruiting condition this year. Those who force can see at a glance how far the growth is in advance of Lord Napier. I have the tree only on open walls. So many very fine fruits have come from Messrs. Rivers, that Rivers' Early Nectarine is likely to

be a special favourite for many years to come, and will prove a rival to the well-known Lord Napier, one of the best all-round Nectarines we have, good both in the forcing house and on walls in the open; but that is of little consequence, as if it be superior to that variety a great point is gained—there will be less hard forcing and equally good results. The grower quoted above describes the new variety as a large flowered one and somewhat similar to Lord Napier, requiring care in setting; and I am of his opinion—that the large-flowered varieties are not such free setters, whether Peaches or Nectarines. So far I have never found the least difficulty in setting Lord Napier, but the reverse, as it sets too freely. I expect when the new variety attains the same strength as the older kind it will be equally free setting. With me Lord Napier sets much better than Elruge and is, I consider, superior in every way. Elruge, though it sets enough for a crop, does not set so freely as the variety named. With many new fruits a fair test cannot be expected the first season, as the trees must get well established. There is such a demand for stock that time must be allowed for the trees to make sufficient strength to mature the fruits. Early flowering, I may remark, does not signify early ripening.—W. M.

**Peach and Nectarine trees dropping their blossom-buds.**—This is a perennial complaint made by both amateurs and gardeners, and both are slow to admit that they have themselves to blame for it. Out of doors blossom-buds and blossoms are frequently so damaged by frosts that they will drop off, let the gardener do his best. Skilful and persistent attention is of no avail; nothing can stand against continued cold winds, with the temperature below the freezing point. Under glass and the houses well constructed, the buds should not drop before the blossoms are developed nor after the blossoms decay even when early forcing is necessary. The causes are as follows: Imperfectly developed and badly ripened wood, owing to the premature destruction of the leaves by red spider, aphid, or mildew, aggravated by lack of heat after the fruit is gathered. Peach and Nectarine trees want attention until the leaves drop naturally. Another frequent source of this evil is over-dry borders in winter. Vine borders may be allowed to become almost dust-dry in winter (although they ought not) without any apparent evil resulting therefrom. Not so Peach borders. The roots of Vines are apparently dormant in winter, but the roots of Peach and Nectarine trees are always in an active condition. The roots are always pushing into the border, and if the soil where the points of the roots are becomes dust-dry, the extremely delicate cells at the growing points of the roots are injured and destroyed by thousands, and when required to act are incapable of action. The flower-buds develop rapidly in the atmosphere of the forcing house and drop off owing to want of support. These are the principal reasons. It is not difficult to apply the remedy.—J. DOUGLAS.

**Apple Loddington Seedling.**—I agree with all that "S. H." writes in favour of this old favourite on page 111, as it is one of the most prolific varieties that I know and succeeds admirably on all and every form of tree. As the grafting season is upon us again no mistake can be made in sawing off the heads of young and unfruitful trees, grafting again with a variety that is large, of good appearance and a continuous bearer. Of late years some attention has been drawn to cordon trees trained by the sides of the walks about 15 inches or 18 inches from the soil. The number of varieties that are a success on that system of training are very limited, but Loddington can claim to be one of that limited number, never failing to crop.—W. G. C.

**Apple Cox's Orange Pippin.**—"E. M." is fortunate in getting this superb Apple to crop freely with him. Here in Herefordshire it is a partial success, in some places doing fairly well and in others only a mile or two away refusing to

fruit at all. I have a considerable number of dwarf and other forms of trees of this variety. Dwarf trees do very well, but standards every year are infested with mildew and cannot be said to be profitable; but as "E. M." remarks, where this Apple does succeed well it ought to be planted very extensively. No Apple that I have grown is so much in demand, which always exceeds the supply. I think I have tasted Apples from every clime in which they grow, but never found any to equal a good English-grown Cox's Orange Pippin.—W. G. C.

#### AMERICAN PEACHES.

THE remarks of "W. L." on the varieties of American Peaches are worthy of special attention by Peach growers, and I think all who have tried them over a series of years will feel disappointed with them for forcing. When Early Alexander and Waterloo first came out, I planted them for furnishing ripe Peaches in May, and for a few years they did remarkably well, casting comparatively few buds, and ripening up good crops of handsome fruit that looked very tempting, but was not so good in flavour as appearances represented them to be. However, after the lapse of a few years, bud-dropping became general on all the American varieties, while European sorts in the same house did not cast a bud, producing excellent crops annually. This year I have rooted out most of the former, and shall be very shy at again trying American varieties. There are hosts of causes mentioned from time to time as to what produces such a serious defect as bud-dropping at the time of starting Peach trees, but in the varieties under notice I feel certain the defect is constitutional in our climate, or rather under our conditions of forcing. Although American Peaches succeed very well on walls outside, they will not last long in a healthy and fruitful condition when forced, according to my experience and observations in other gardens. It may be possible that forced trees will not repeatedly stand the long season which frequently lasts from November to end of September, or say only two months' real rest, as many gardeners commence to force at the end of November, and if the trees are healthy and free from insect foes, they rarely lose their foliage before the end of September. I believe no trees are at rest until all leaves are down; in fact I question if root action ceases until a later date. Many, if not all our English Peaches will stand this long season of growth or activity with a short period of rest for years, and I think "W. L." has done a great service in drawing attention to the serious failings of American sorts, and he will also have saved some intending planters a loss and disappointment, as, after reading his excellent and timely observations on young Peach trees, they will in all probability not choose the unreliable American varieties. W. G. C.

**Pruning Peaches.**—This work should now be brought to a close. In favourable seasons it would have been completed before this, but with an arctic winter much work among hardy fruits has been at a standstill. There is a great advantage in such seasons as that we have just passed through in paying ample attention to summer stopping, as by so doing there is little pruning of any kind—merely removal of naked branches and giving the young or stronger wood space to develop. The trees are later this season than I have known them for years, and I should say there is every prospect of a good crop, as though the autumn was not favourable to ripening the wood, where attention was paid to the removal of old fruiting wood and useless shoots the new wood presents a brown and firm appearance. After pruning, I leave my trees unnailed as long as possible, and tie the young fruiting wood out so as to get as much exposure as possible. Once the flowers show colour, it is not wise to delay the nailing, at the same time giving the necessary protection to the flowers. If planting of any kind has been done since the break up of the late frost,

nailing should be left as late as possible, and the surface soil well firmed by treading previous to nailing. The surface soil of recently-planted trees will be best left in a rough state for a time, as such trees will require time to settle. Covering with a mulch at planting will cause the surface soil to be much colder than the surrounding soil. Ample mulchings later on will be beneficial and check drought. To dry, light soils these remarks do not apply as when there is a heavy clay soil to deal with. In the case of light soils watering may be necessary soon after planting, as the recently dug ground will dry quickly at this season. When renailing, it is best to remove all old shreds, which harbour insect pests. Give young shoots ample room to swell, as if the wood is tightly pressed, it is the cause of gumming and canker. In tying large branches with twine allow room for expansion, and in securing the main branches of young trees take care not to crowd at the start, so as to leave room for young wood.—S. H. B.

**American blight.**—This pest is often left unnoticed at this season, with the result that it is rampant in July, August and September. Growth being late this year there is still time to cope with the disease. Cordon, bush and pyramid Apple trees are more liable to American blight than others, as it spreads so readily, the manner of growth to a certain extent assisting in its development. I find that soluble petroleum and clay mixed to the consistency of paint and well rubbed into the crevices of the trees attacked by blight will do much good. I have also used a brush dipped in the paraffin, but do not advise it for young trees, as the spirit is soon exhausted, whereas the paint remains good for some time and the tender bark is not injured. I am aware painting is a tedious process, but if not attended to there is total loss of trees, as by syringing in the summer one cannot reach all parts of the trees.—G.

#### THE GLASTONBURY PEAR.

THE Glastonbury Pear and the Benedictine are the same. Mr. Carter's inquiry recalls to me what took place in the early sixties. The first public notice of the Glastonbury Pear was taken by the late Mr. Shirley Hibberd, who was one of the judges at the mid-Somerset Horticultural Society. At his request I sent him some fruit which Dr. Hogg, I believe, exhibited at the R.H.S. meeting. I was requested to give its history, which appeared in the *Journal of Horticulture*. At that time there was standing an old stunted Pear tree in a hedge at the back of St. John's Church; it was looked upon as a wilding. The fruit was small and indifferent, but of fine flavour. It would have remained unknown had not Mr. Chapman taken grafts or scions from the old tree and grafted them on fresh stocks. I was then making a collection of Pears and considered that particular Pear out and out the best, Doyenné du Comice then not being known. I considered that through the trade something profitable might be made of it. Accordingly, I grew a great many trees for grafts or scions, many of which I gave away to applicants in this country and America, amongst them the late Mr. T. Rivers and John Scott, of Merriott. Some few years after I left my home and the Pear trees. During that time some one in the trade played a trick on the trade and public and had my grafts, which gave me much annoyance, as I had heard from Messrs. Rivers and Scott that they had bought maiden trees of a Pear which had been shown at the R.H.S. and certificated and named Benedictine, a seedling raised at Glastonbury; parentage, Huyshe's Prince Albert, I think, and an old kind growing in the abbey enclosure, and called after the order to which the monastery belonged. Both Messrs. Rivers and Scott immediately recognised the similarity of growth, &c., in the old and new shoots, and resented the imposition.

I have again turned my attention to fruit growing, being again settled at home. A few years ago I sent some of the fruit to Mr. Iggulden,

who considered them first-class; the misfortune is it is of the same season as Doyenné du Comice. At the same time I sent some to Mr. G. Bunyard and give you an extract from his letter. November 11, 1890: "The two Pears are large in size and of the finest quality. We should like some grafts, as Pears that bear in such a bad year as this are worth propagation. We shall be pleased to send you trees or grafts in exchange." I have come to the conclusion the sort has its likes and dislikes of soil, situation, &c., and cannot be relied upon as Doyenné du Comice year after year to be first-class. This last season especially with me proves it. It is a certain cropper; for the past thirty years a tree horizontally trained on a S.W. wall has never failed. Fruit thus grown will average 10 ozs. to 12 ozs., and some over. Shape bluntly pyriform, skin peculiarly thin, cinnamon-brown colour, deep rufous-brown suffusion when exposed to the sun. It is at its best in the first fortnight in November; texture slightly gritty, according to the season. It is a juicy luscious Pear with a peculiar subacid flavour. J. A. POWELL.

**Apple Newton Wonder**—Sent out a few years since as a late keeping variety, this Apple is sustaining its reputation and deserves to be more extensively planted, as its constitution appears suited to various kinds of soil. In shape the fruit is not unlike that of Belle Pontoise, though rather more conical.—E. M.

**Grafting fruit trees.**—Preparations must now be made for grafting, and as it often occurs there are varieties one may wish to grow and to get fruit of in quantity in a short time, grafting is the quickest way to secure a crop or to obtain better varieties on old trees. Large regrafted trees may be had in a bearing condition in three or four years. Grafts for inserting later on should now be got ready for the work. These should be cut at once and healed in a shady cool corner. Stocks should now be headed down, as at this date there is no fear of dying or shrinkage of the bark at the portion cut back. In the case of large or old trees it is not necessary to cut back so severely as is frequently practised. It is an easy matter to insert a large number of grafts if the trees are not cut too low and a quick growth is secured with a better balanced head. In selecting grafts be careful to obtain them from clean trees.

**Protecting wall trees.**—Apricots will claim first attention. So much depends upon the situation or position of the trees, that a hard-and-fast line cannot be observed. In my case I have wide copings and, of course, less protection is necessary. Glass copings are most desirable and of great utility where they can be fixed and readily removed. Permanent copings I do not advise, as during the greater part of the year the trees are best exposed. With a permanent coping it is a difficult matter to keep the foliage clear of red spider. When the trees are given a warm covering like frigi domo I would advise care in its removal in mild weather, as a close, sunless atmosphere will bring the blooms down in shoals. The bloom of many fruit trees, if in a dry state, will stand severe frosts; hence the value of a good coping to throw off rains and keep the flowers dry. Many growers use double or trebled fish-nets, hung loosely over the trees, with a few supports to keep them clear of the wall. Scrim canvas or tiffany is also a good protector, as, being light, it does not prevent air passing freely to the trees. When a good protector is obliged to be put up merely for bloom protection, it must be borne in mind the best results are often secured by the most primitive means. I have previously noted the importance of air passing to the trees, as too heavy coverings weaken the bloom, and it would be better in such cases not to cover at all. Whatever means is adopted to protect the bloom it is not necessary for the covering to reach the bottom of the trees. Curtains made with rings to run on iron rods are more readily placed in position than any other movable protection, but even then I would advise a thin material for the curtains, drawing them aside early in the day, and in mild weather letting the trees be freely exposed.—W.

## BULWICK.

THE artistic garden, notwithstanding much talk of gardening in these days, is one of the rarest things to find—as rare as the great book or the true picture. Rambling about Northamptonshire last autumn, and delighted with its beautiful old houses, many of them, unfortunately, as bare of flower gardening as a deserted ship, it was pleasant to come to a real garden at Bulwick full of Carnations and many open-air flowers arranged in various pretty ways, even the house being full of large basins of Carnations, some of them of one self-coloured kind—a rare pleasure.

The flower garden was not one of those places which astonish us by a showy display, but modest at first sight as regards flower

kitchen garden thrown into 4-foot beds, with little beaten alleys between, in which many thousand Carnations were grown in simple masses, almost as they would in the nursery.

One sees at once how much more beauty and variety can be got in such ways than where all the effort goes to help one scheme for effect in front of one's windows. Some kinds of Carnations were grown very finely, and the finest single bed of one kind of Carnation I ever saw (Ketton Rose) was here with many thousand fresh buds and blossoms—a wondrous sight, which the engraving attempts to show.

What is the secret of beauty in such a garden, and what the lesson to be learnt from it? It is that no one way will give

found the secret we cannot always pursue the same plan, though we may learn much. It would be better for our flower gardens if imitation were more difficult, as the greatest pleasure of the garden only comes when the best use is made of every scrap of the ground and with plants and ways adapted to the spot and to no other. The late Lady Henry Grosvenor was not only a lover of good gardening, but a real gardener herself, and she was well supported by her excellent gardener, Mr. Drantfield.

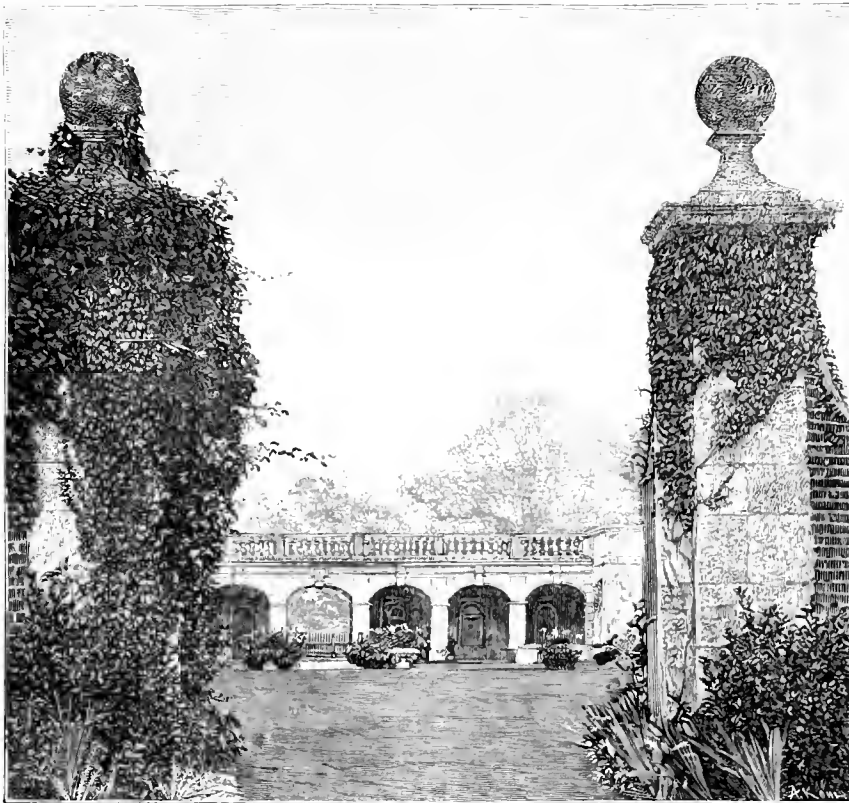
I have to thank Miss Willmott, who knew the garden well, for an excellent series of photographs of the garden at Bulwick, some of which have been engraved for THE GARDEN and are issued in this number.—W. R.

A correspondent sends us the following details of the garden in 1894:—

Bulwick Park, Wansford, lately occupied by Lord and Lady Henry Grosvenor, is a very old mansion situated on the southern slope of a valley in the midst of some very fine wooded scenery in the county of Northamptonshire. The house, built about the year 1602, is entered by a pretty colonnade, which borders one side of the garden, and has a very nice effect. From the mansion to the flower garden is a grey stone flag path about 12 feet wide, on which stand during the summer months large tubs of *Agapanthus umbellatus* and grey stone vases filled with scarlet *Geraniums*. The flower garden is flanked on both sides by a shrubbery with a margin left in front for herbaceous plants, &c., amongst which are conspicuous the *Inulas* and *Giant Hemlock* (*Heracleum*), growing 12 feet high. In the centre (looking from the steps) of the garden is a broad sweep of Grass. On either side, running the whole length of the garden, are two long borders filled almost entirely with herbaceous plants; noticeable in particular are the perennial *Sunflowers*, *Delphiniums*, *Gypsophilas*, *Asters*, *Anthemis tinctoria* and its white form, tufted *Pansies*, and a great many *Narcissi* and early-flowering bulbs, each coming into flower in its own season and forming a very pleasing contrast to the massed beds of *Geraniums*, &c.

The garden could easily be divided into two, and each would form a complete garden in itself, but in planting them the idea has been to make the whole one complete harmonious arrangement. Four of the corner beds are planted with *Clematis Jackmanni*; the other beds that balance these are planted with white *East Lothian Stock* and tuberous *Begonias*, the latter on a groundwork of golden *Thyme*. This makes a very pleasing effect. The four half-moon shaped beds round the centre of the garden are planted with *Geraniums*, each bed being filled with a distinct coloured kind. Down the centre of each side of the garden at equal distances are three large round raised beds; the smallest in the centre of the three is filled with *Sweet Lavender*, coming through it is *Hyacinthus candicans*. The first round beds, looking from the steps, also the farthest (which is the largest), are filled with mixed plants, the idea being for yellow and purple to predominate in the two farthest beds. This is effected by using *Anthemis tinctoria*, *Delphiniums* and *Campanulas* interspersed with *Dactylis glomerata variegata*, *Zea*, and the *Giant Flax*. Round the outside is a row of grey *Lavender Cotton*; outside this again is a row of purple *Chilian Beet* (these large beds are about 30 feet through).

The other two large beds (near the slope) are filled with mixed plants; conspicuous among



Covered way, Bulwick.

gardening in immediate relation to the house. That, however, was interesting, and had more leaf and grace about it than are usual.

The chief charm of the place was not there, however, but rather in various little side gardens and long and pretty borders backed with Holly and other hedges, and giving an opportunity for growing a great number of hardy flowers which bloom in the autumn. These formed picture vistas, of which the effect is very often better than a flower garden of the usual type.

But, more than this, the excellent plan was followed here by the late Lady Henry Grosvenor of having what I do not think any garden can be rich and satisfactory without, namely, a "square" or reserve garden in which things are grown well without reference to effect. It was a large square of the

us a true garden which is likely to be beautiful even for any length of time even in the fine season. Any one way is so liable to failure from the weather or other causes, that the main source of success is to have a good many ways with flowers, as there were at Bulwick. Hardy plants in beds and borders apart from the flower garden proper (that, too, being pretty) are the source of the charms of this garden—the variety of situation, variety of plants—but of handsome, well-chosen and well-grown plants, and even variety of level in the various gardens, such as occurs at Bulwick, are all good aids.

The nearness of an interesting kitchen garden with sheltering walls is a source of beauty and infinite variety, but this is just what does not occur in every place, and many houses are best without it, so that when we have

them is Eulalia, planted at intervals and rising out from among the bright coloured Gaillardias, Celosias, Anthemis, Nepetas, Scabious, &c. For giving a light aspect to a large bed there is no more useful plant than this Eulalia, as its grey foliage harmonises with any colour you choose to place it with. Round these mixed plants were planted two rings, one silver Chilian Beet, and outside this Mrs. Sinkins Pink; in the centre of the bed are Dahlias, Nicotiana gigantea, &c.

Standing on the higher slope and viewing the garden as a whole, you cannot help being struck by the many natural advantages such a garden possesses. Although simplicity itself stamps it in every conceivable way as regards its construction, still the beds, though simple in form, are very bold and well balanced. Then there is the green carpet of Grass surrounding each bed, which of all things is the most becoming in a flower garden. Leading from this garden to the bowling green below are steps; the iron rails, which are old Dutch work, are covered with Ivy, Ampelopsis, and climbing Roses. The effect, especially in the autumn, is very pretty. To the right of these steps, and running the whole length of the wall, is a border of mixed Irises. On the left is another border filled with herbaceous plants, the walls here being covered with Tea Roses chiefly.

#### THE BORDERS.

Retracing our steps, we start again from the higher terrace by the mansion, and, turning to the right, pass through a gateway, with its old chains hanging on the iron gates, the gates themselves seeming as though held open by Gloire de Dijon Roses and other climbers. We notice two beautiful pillars surmounted by two high balls, covered with Ampelopsis. In front of us and running the whole length of the kitchen garden is a fine old herbaceous border, about 150 yards long and 35 feet wide; down the centre is a green sward of Grass about 8 feet wide; on either side is the border backed up by a Holly hedge, with standard Hollies rising at intervals the whole length. This hedge is clipped yearly, the top coming to a point, and is kept about 7 feet high, so that it forms a good solid background to the border. This border and the beds in the flower garden were designed by a lady, evidently a good gardener, assisted by the late Rev. J. M. Berkeley, the naturalist who was then vicar of King's Cliff, a neighbouring village. These borders have been kept very gay through the summer by the use of annuals sown in front and among the older clumps of perennials. Turning to the left from the pillars (we pass an old, large evergreen Oak, bound together by chains, and supported by huge forked branches), we approach what is called the Rose garden; this garden consists of beds running parallel with each other, and one across the bottom. This little garden is surrounded on the north and east by an angle of the garden wall, on the south by a Yew hedge planted twenty years ago, clipped into a pyramidal shape. The bed at the lower end of the garden is planted with Delphiniums (named varieties) and Liliun testaceum clumps alternately; these form the back row; in front of these are planted named varieties of Paeonia sinensis, in front of these, again, are clumps of Spanish Iris and clumps of choice Narcissi. As these bulbs die off, Lobelia cardinalis are planted to follow on, the whole bed being edged with purple Viola Archie Grant.

#### CARNATIONS.

The centre bed in the garden is planted with Carnation Ketton Rose; this is the second year it has flowered in the same place, and on this bed—about 25 yards long and 6 feet wide—

there were when at their best 15,000 good-formed flowers expanded at the same time, a sight to be remembered.

Leaving this snug corner, we pass through an opening in the Yew hedge and enter what should be the kitchen garden; but such was Lady Henry Grosvenor's love for flowers, over half an acre was monopolised here for growing Carnations and like flowers for the house and for sending to hospitals. First we come to what may be termed nursery beds, which earlier in the season were aglow with florists' Tulips, Ranunculi, and Spanish Irises, but are now filled with seedling Hollyhocks, Dahlias, Carnations, &c., the outside bed being used for various species of Roses. Leaving these small beds we come to what may be termed a "garden of Carnations." As we stand on the top of the garden, running in front of us are six long beds filled with Carnations, each bed 60 yards long and 5 feet wide. On the right-hand side and running the whole length of the beds is a hedge of Sweet Peas, on the left the same, with a row of Cactus Dahlias in front of them. The Carnations, which have done exceptionally well, are what are termed hardy border varieties, and as they are grown entirely for cut flowers, no attempt is made at disbudging. As the flowers expand they are cut every morning, or as occasion may require, and that unstintingly. The ground being a good medium heavy loam, no manure is used except for mulching, but burnt ashes in quantity are substituted for the manure, the ground well prepared in the autumn, and all varieties (except Gloire de Nancy or any that there may be a doubt about their hardiness) are planted out in October. Last winter they had no protection. After planting nothing is done (save hoeing among them to keep the weeds down) until they are staked and tied, when if it is dry they have a thorough soaking of water, then directly a mulching of peat Moss and litter from the stable. Respecting the sorts grown, first comes a new one named Lady H. Grosvenor, to which a bed has been allotted. This variety comes into flower long before the general collection, and such is its flowering qualities that most of the grass runs to flower, thus keeping up a continual succession of bloom. The difficulty is to get a good stock of it. Lincolnshire Clove comes next, a late-flowering variety, at its best a fortnight after most others are past. G. F. Sage, the Burn Pink or Duchess of Fife, Duchess of Portland, Mrs. R. Hole, Mrs. Muir, Gloire de Nancy, Germania and Ketton Rose are grown in quantity; then a bed is devoted to French and German-named sorts, amongst which are some very pleasing things. Then another bed is set apart for the trial of new sorts. Perhaps most conspicuous among the Carnations are the pinks, rosy pinks and salmon pinks. There are about 200 varieties, numbering in all about 6000 plants.

#### GRASS-WALK BORDERS.

Leaving the Carnation garden we pass down a Grass walk, which leads into what is called the lower garden. On either side is a mixed border, at the present time gay with Sunflowers, summer-flowering Chrysanthemums, Gaillardias, Cosmids, Cactus Dahlias, &c. At the back of each border are planted sweet-scented Pelargoniums for cutting. Down this border, at intervals of every 8 yards or so, are erected rustic arches, over which are climbing Gourds. Passing on we come into the lower garden, which is used as a vegetable garden. The walk through the centre leads down to the Yew hedge, through which an opening has been recently cut to show the water in the distance. On either side of this walk are hedges of

Sweet Peas forming a background for a border composed of Roses, Cloves, pink and white Stocks, these edged with Musk and white Thrift. On the doorway, and forming as it were a framework for the door-posts, are Lathyrus grandiflorus and Lathyrus latifolius roseus, also two small hedges of that most blue of all Peas, Lord Anson's. The border here on the left is filled with seedling Carnations, about 600. On the right we notice the Indian Maize growing 8 feet high (as a vegetable). The cinder walks being near the water are studded with pot Chrysanthemums (400 being grown). Passing through the door we turn to the left on a Grass walk, which leads us round the outside of the kitchen garden. On the right-hand side of this walk runs a 6-feet border, which is full of Narcissi. In the far corner we notice huge bushes of Nuts, carrying heavy crops. Here Sweet Violets, single and double, are grown for winter flowering in frames, nearly 1000 roots being prepared for that purpose. Passing along we cross the bottom end of the long herbaceous border, where we pause to admire the beautiful iron gate leading out into the park. This gate is reputed to have been made by a blacksmith at the neighbouring village of Deene, and is a splendid piece of workmanship, the design being certainly Dutch. Leaving the gate we come into the upper kitchen garden, which is full to overflowing with vegetables and fruit bushes. Retracing our steps past the greenhouse, we noticed five hedges of Emily Henderson Sweet Pea, each about 40 yards long. Although the flowers have been cut from them by the basketful, still they are carrying a good crop of seed.

In walking round, one of the most striking characteristics of the place is the Grass walks. This is easily accounted for, there being no gravel pits in the locality. Running round the entire length of the outside of the kitchen garden is one, there is another crossing the garden east and west, then there is one down the centre of the long herbaceous border going north and south. The effect of these Grass walks and their charming fringes of border is very pretty.

## FLOWER GARDEN.

#### COLOUR IN FLORISTS' FLOWERS.

WHATEVER may be the difference in the views of Mr. Douglas and myself on the above subject, my desire was simply to prevent its being supposed by anyone not familiar with our flowers that the combination of "rose and purple on a white ground" in a Carnation is rejected by florists. The class represented by this combination of colours is a long-established and a favourite one, and the objection to Mr. Douglas's flower as shown in Mr. Moon's figure of it could only be that it had not enough of the bizarre character in it.

As regards Dorothy, the pale rose flake, I saw it here in the gardens of two of my neighbours, and I noticed blooms of it shown at Kensington for two seasons subsequent to the Slough show. The pale rose markings had dwindled to a few faint patches of colour here and there on an acre of white ground, and it soon dropped out of notice. I am, therefore, justified in my view that it was never as a rose flake more than an imperfectly developed flower. Had it been other than this the colour would have stood as has the colour of varieties like Crista-galli and Sybil, after close on thirty seasons of blooming, just as has that of Mr. Douglas's own grand flower Thalia, which is the queen of all the rose flakes.

Mr. Douglas admits that florists do not exclude from their exhibitions Carnations other than the

bizarres and flakes, but claims for himself the entire credit for providing classes for the selfs and fancies, adding that "the florists opposed them and would have none of them at first." I do not wish to deny to Mr. Douglas his share of credit in the matter, and it may easily have been that there were those among florists who, without disparaging the beauty of the selfs and fancies, thought their young society would have enough to do at first in caring for their own special flowers. Be this as it may, I have heard the late Mr. Dodwell relate more than once that when Mr. Charles Turner and he were contemplating the establishment of the southern section of the National Carnation Society they wrote—in letters which crossed—each suggesting to the other the providing of classes for the self and fancy flowers. In view of this action on the part of the two leading florists of their day, it is scarcely fair to say

florists of the old school of certain varieties because of their shade of colour. I will be quite plain and will not "confuse the issue." Mr. Horner mis-reads me when he says, "It is too wide an assertion to say that in the florist's Carnation we insist that the colours, whatever they are, should be of a dark and not a pale tint." He takes this to mean that I object to rose flakes and pink and purple bizarres in Carnations. On the contrary, I think the rose flakes are the most beautiful of the show Carnations, and have often said so, and I admire the pink and purple bizarres. What I did and do object to is that the strict florist admits, say, Sarah Payne and William Skirving, but throws out Harmony. The judge who did so was brought from the north of England as the best representative from the north. So far from my rejecting the pink and purple bizarres or the rose flakes, I must refer again to the

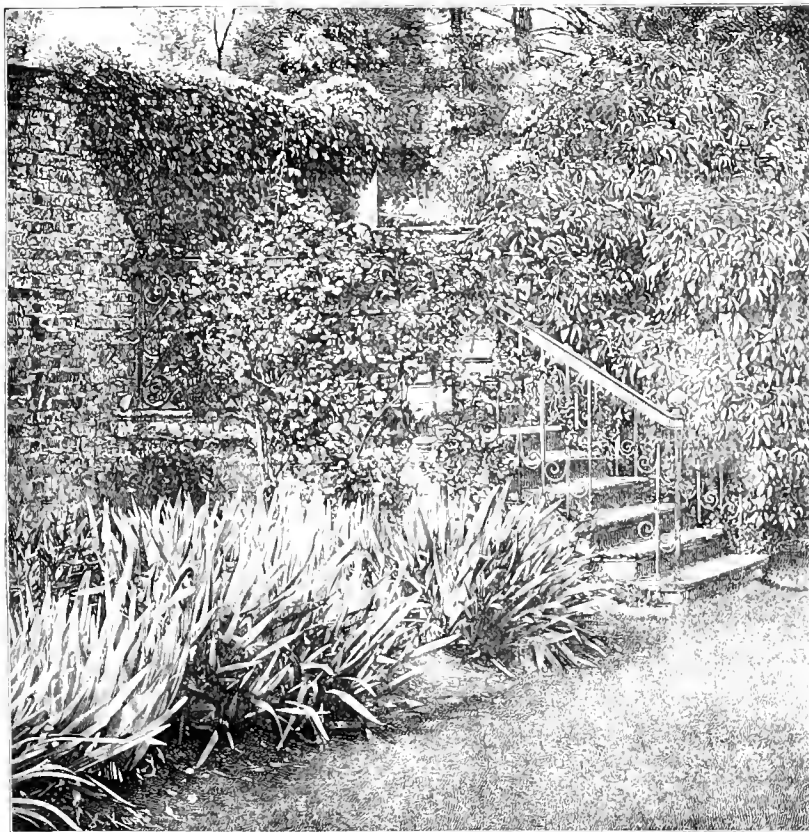
a "washed" colour when I see it. A Pink can be a pale delicate pink without pallor or suggestion of skim milk.

As to the Auricula, Mr. Horner knows as well as I do that the old Lancashire florists would have none other colour than the black in Auriculas as a ground; consequently they did not follow up any departure from this. The blue ground I think lovely in white-edged Auriculas, and I have seen all the varieties exhibited by Mr. Simonite, and also by Mr. Horner in the south; and if the florists as a body will take up other colours as well as the "black" ground, the Auricula will soon become more popular than it is.

As to the Tulip, Mr. Horner knows all about it, and he also knows that the objections I have raised are not new. I would object to an impure base as much as Mr. Horner would in a feathered Tulip, but the original species—*Tulipa Gesneriana*—has what the florists term an impure base; but they have worked it out, and the base in a garden Tulip is a clear yellow or white; but as this "fault" was implanted there by the hand of Nature's architect, I am not sure that we ought to consider it a blemish. What I would like to see done—and I hope it will be done—is a standard of excellence set up for all our florists' flowers. The Horticultural Society is engaged in this work at the present moment, and I am sure any suggestions from florists would be considered.

The late Mr. Glenn wrote a book on the properties of florists' flowers on the lines of the old florists, with certain modifications. I believe it would be a great help to a judge if every floral society were to publish a complete standard of excellence and a code of rules for judging. This want has always been felt, and I know there is much feeling caused by the mistakes made by judges at the present day.

I have before me a circular issued by a floral society in 1834, in which it states that "in consequence of the disappointments which the cultivators of florists' flowers have frequently met with at the society's exhibitions, by reason of the censors awarding prizes to flowers that in some cases ought to have been set aside as wanting the requisite qualities, and in others by their marked preference for flowers that were but lightly esteemed by the most experienced cultivators, it was deemed expedient to appoint a sub-committee to draw up rules for the guidance of the censors at the society's future exhibitions." The names of the sub-committee might be interesting; they were: James Twitchett, Richard Headly, Adam Finch, Fred. Finch, Samuel Widnall, Edward Catling. They give their views of the standard of excellence in Auriculas, Polyanthuses, Tulips, Anemones, Ranunculuses, Pinks, Carnations, and Picotees. It may be remarked that they say nothing about the stained stamens being a disqualification in a Tulip, but they use the word "must" in many places where I would use "should." In fact, the use of this word "must" by florists being insisted upon when certain points are considered is one of my main objections.—J. DOUGLAS.



*Iris border in lower garden at Bulwick.*

that the establishment of these classes was "opposed by the florists."

I fail also to see the justice of the antagonism which Mr. Douglas seems to set up between the artist or "other tasteful person" and the florist. If the artist admired Mr. Douglas's pink and purple bizarre Harmony, he would also admire Sarah Payne or William Skirving, which are more highly developed flowers of the same class. He would admire in them, just as we do, the symmetry of form, the harmony of colour, and the combined refinement and force which are the characteristics of these fine flowers.—M. ROWAN.

I have received a number of letters from lovers of these fine old garden flowers, most of them from old friends. One or two of them seem surprised beyond measure that I should write as I have done. I will ask leave to make a few more remarks to explain why I wrote and also to show that I had reason on my side.

The Rev. F. D. Horner has also written to the editor, and I would like to point out that he and others have not quite understood me. What I objected to was the total rejection by some

election of varieties just published. Where the rose flake obtaining the highest number of marks was raised by me, and I can add that Harmony has crept up to the third place in the election, two others of the same pale tints raised by me have also obtained places. I suppose the florists are at last getting out of this groove. There is another point upon which I am at issue with the old-fashioned florists. They say that every petal in a bizarre Carnation must have two colours upon it, or the flower must be disqualified. Never mind how beautiful all the other petals may be, as a show flower it must go, unless, peradventure, one spot may be found of the second colour. Let the fault be a point against it if you like, but do not let it be a disqualification. The growers of Carnations are becoming more numerous year by year, and I am constantly being asked to define the distinctions between a florist's Carnation and a border Carnation; whereas I contend that there is no difference. They are all border Carnations. Mr. Horner knows very well that no one insists more upon broad, well-formed petals than I do, and that I have sense enough to know

**Tufted Pansies.**—If we accept this name for those plants that were formerly known as *Violas*, it should, I think, be applied only to those varieties that are really entitled to such a name, and not to those whose habit of growth and power of reproduction more resemble the true Pansy. Take, for instance, that type of flower of which Countess of Kintore and Annie King may be cited as examples. Save for their long-enduring and very free-flowering properties they have little in common with a true tufted Pansy. The profusion and density of growth emanating from the old root are wanting and the liability to split up the old plants into an unlimited number of parts, each with its tiny rootlets, is also wanting. These characteristics are noticeable in many varieties that are now catalogued as tufted Pansies. These remarks must not be taken as intended to depreciate the worth of these particular varieties for the flower garden. On the contrary, they are beautiful and long-enduring. My contention is simply that if *Violetta*, for example, is a true

tufted Pansy, it requires a considerable stretch of the imagination to put Countess of Kintore in the same class. Now that the *Violetta* type is being strengthened each succeeding year, why not put all of similar habit into one class and let the strong straggling growers be known simply as *Violas*? Some of the stronger varieties are noticeable for very distinct foliage, slightly darker and individual leaves at once larger and also firmer and more smooth in texture. I have found this especially in *Annie King* and in a seedling obtained from *White Swan*. A careful inspection of the beds now that the spell of frost is over shows very few gaps in the ranks of the number of plants (rather over four thousand in fifteen varieties) put out last October. Not more than a score are missing, a fact that speaks volumes for their hardiness when we consider that for many nights in February the glass was at zero, or only a few degrees above that point.—E. B.

**Polyanthuses.**—Late-sown seedlings of these that were pricked off on prepared borders will want a little attention as soon as the ground is workable, for unless they were inserted very firmly there may possibly be an upheaval of the small plants and an exposure of roots. Having secured an excellent stock in separate colours, I was able after the flowering season to split up the old plants, and to obtain in this way quite as many as I required. A showery time followed the replanting; the plants came away without any check and threw quite a nice lot of flower throughout the autumn—in fact I was able to cut good trusses until the first frost in January. All the *Polyanthus* family as well as the tufted Pansies will be welcome this spring. It seems probable that other things, Wallflowers and *Silene* for example, will not recover from the frost. A fairly moist spring is the best for *Polyanthuses*, especially on light, dry soil. They were poor, for instance, in 1893, where such conditions existed and good surface mulching and watering were not practicable.—E. B.

**Effects of the frost on shrubs.**—It is perhaps somewhat early to pass a decided opinion as to the damage done, but I should say, although not of a permanent nature, the exceptional weather in February will be answerable for considerable damage to foliage, and also for the destruction of a lot of the earliest buds on deciduous shrubs. Nearly all the *Laurustinus* bloom, whether expanded or in bud, is destroyed, and the buds on either side the shoots three or four pairs down from the top also appear to be badly nipped. I was looking over a big mass of *Rhododendron Nobleanum* lately, and find that all points of the foliage are touched, that is the tender foliage, some half a dozen top leaves. Some out-door *Camellias* that anticipated the season, owing to the mild weather experienced until the new year and made a slight start, have naturally received a rude shock. In the way of deciduous shrubs, I have to record with regret a big loss of buds on the white form of *Cydonia japonica*; we shall miss the sheet of bloom that is usually a prominent feature in the flower garden quite early in the season. The buds, to use an expression common among gardeners, also look very "shaky" on that lovely deciduous shrub, *Spiraea prunifolia* fl.-pl. Matters, however, are never so bad but that they might be worse. If the mild weather of the early winter had lasted a few weeks longer and the severe frost had then followed, I fear we should have chronicled a much heavier loss.—E. B., *Claremont*.

**Starworts.**—As the majority of these bear late division and replanting better than most herbaceous plants, advantage may be taken of the earliest time when the ground is workable to fill up any gaps in borders or shrubberies where their presence would be acceptable. It sometimes happens that in trimming up Evergreens or looking through deciduous shrubs portions of soil may be laid bare by the removal of unsightly or dead branches, and if there are no more shrubs to hand, the gaps can often be filled with the taller herbaceous plants to give a bit of colour, and

there are few better things than Starworts. One can command such a variety in height from 18 inches to 6 feet, and they also possess the merit of flowering satisfactorily the first year if care is taken in the planting. A little good short manure to work round the roots and also as a mulch is advisable. Touching the practicability of late lifting and replanting suggested above and the qualifying statement "some varieties," it may be noted for the benefit of those who are only just starting the cultivation of these plants that there is a wide difference in their habit of growth; some will grow anywhere and anyhow, except perhaps in the poorest and driest of soils, and once established are almost as difficult to get rid of as Couch Grass, whilst others have no rambling tendencies and increase in bulk very slowly. As it is always advisable, if possible, to plant each sort in sufficient quantity to give a fair idea of its merits, the planting may naturally be close or wide to suit the characteristics of the variety. A case in point to illustrate the suggestion here made may be given. *Amellus bessarabicus* and *acris* are two varieties almost identical in height and time of flowering, but whilst a small piece of the former would cover a square yard of ground in two or three seasons if not kept in check, the latter is emphatically a "stay-at-home," and it is a long time after planting before one gets a large clump of it. In justice to this very beautiful Starwort, it may, however, be noted that a surprisingly large head of flower is produced from a comparatively small plant. It was seen in perfection last year, the damp summer having the effect of preserving the individual flowers at their best much longer than usual, besides being answerable for additional vigour in the plants.—E. B.

#### FLOWER GARDEN NOTES.

ADVANTAGE must be taken of the first time the ground can be pronounced in a workable condition to make an inspection of herbaceous borders, with the view to ascertain the amount of damage effected by the frost, and to make provision for repairing the same at the earliest opportunity planting may be practicable. Fortunately, there are not many inmates of these borders that are likely to succumb in ordinary winters, except it may be *Chrysanthemums* and one or two other things that may have fallen victims to insufficient mulching, as *Romneya Coulteri*, or to the neglect of tying up the foliage to protect the heart of the plant, as with *Yucca filamentosa*. This late frost, however, has been so exceptionally severe and prolonged as to play sad havoc with some plants that as a rule come safely through the winter—*Antirrhinums* and *Pentstemons* for example. They may generally be depended on to break away from the stem even if the foliage is crippled, but this frost seems to have gone clean through foliage, branch and stem. Bearing in mind, therefore, the possibility of losses, it is always advisable to have a little stock in hand of really good things with which one may replace such losses. The two species above named as likely to succumb to the frost as well as scarlet *Lobelias*, *Phloxes*, perennial *Sunflowers*, *Starworts* and many other things can all be readily increased either from offsets or cuttings. If these were inserted at the proper time and then potted or boxed, they should now be capital little plants. Of course, in the case of those varieties where there is plenty of stock and division is practicable this mode of propagation can be practised, but where the stock is limited it is often not advisable to mutilate existing clumps, and in such cases the slower, but not less certain mode of propagation is recommended. In the matter of the *Phloxes* care should be taken to make sure before planting whether they belong to the tall or dwarf sections, that they may be assigned respectively to the centre or back of the border. Many of the newer *Phloxes* too throw such splendid heads of flower that it is advisable to so plant that they stand clear of each other. A surface mulching is always to be recommended after late planting, and if slugs are likely to be troublesome, some cocoa-nut fibre or coal ashes—the latter perhaps preferably—may

be placed about the plants or things of a succulent nature, as the *Phloxes* and *Pentstemons* are apt to vanish very quickly.

**SISYRINCHIUMS.**—I should like to say a good word for these, especially *grandiflorum*, where the practice of filling up large beds with herbaceous in lieu of bedding plants prevails. This may be planted in bold clumps, the remaining portions of the bed to be appropriated by some dwarf carpet plant. It is very handsome alike in flower and foliage, the latter, indeed, somewhat resembling that of the *Iris* family. Nor ought the old common variety to be despised for rough ground where choicer plants would fail to give satisfactory results. I have worked occasional clumps into such positions together with *Foxgloves*, *Verbascums*, and hardy plants of a similar character, and once planted, the *Sisyrrinchium* can be relied on to yield annually a plentiful crop of seedlings which can be thinned out early in the season, allowing sufficient to remain to cover the ground. Among the various things used for the site above-named were some large clumps of *Lilium candidum*, and the ground having been deeply worked they have done fairly well. I fancy in their case the check given to early growth may have a tendency to keep the plants more free from disease than is usually the case. One always regrets an early development of foliage, as a cold spell often follows, and a check at this time is invariably followed by the appearance of mildew.

**PROPAGATING.**—As the time for the propagation of tender plants is now drawing to a close, it is advisable to make a thorough inspection of the stock with the view to ascertain if sufficient quantities are to hand of the various things likely to be required, and if any varieties are found wanting to consider the possibility of finding sufficient substitutes. Thus, if there is not enough of the dwarf *Ageratum* or a particular strain of *Lobelia* one can sometimes substitute a good dwarf purple *Viola*, and recourse may be had to the old stock even at the eleventh hour. If it is split up into a multitude of little pieces and planted for a few weeks in a bit of good soil, receiving the necessary attention in the way of watering, &c., it will come in very handy by the end of May. Naturally it will be late coming into flower in comparison with October planted cuttings, and the practice is not to be recommended; the fact, however, remains that deficiencies can be made up in this way. Similarly *White Swan Viola* can be substituted for *Mangles' variegated Geranium*, often a miffy plant to strike, and *Lord Elcho, Bullion, or Prince of Orange* for *Calecolarias* and yellow *Tropaeolums*. Again, in the case of large beds where a certain number of flowering or fine-foliaged plants is to be associated with a carpet of hardy plants, the latter may often be considerably strengthened, the propagation of such things, for instance, as *Antennaria tomentosa*, the carpeting *Sedums* and *Veronica* being of a comparatively easy nature. Very quiet arrangements can be made in this way: a group of *Grevillea robusta* or *Dracana gracilis*, for instance, on a carpet of *Sedum Lydium* or even the old double *Chamomile*, and as an example of brighter colouring, clumps of *Lobelia fulgens* *Queen Victoria* or *Firefly* (the latter would seem to be the strongest of the family) on the silvery *Veronica*. Very nice beds can be obtained for small gardens with some of the *Echeverias*, not in the way of carpet bedding, for the practice of sticking these plants close together on a mud wall and carefully pinching out every flower is greatly to be deplored, but planted thinly all over a narrow border, giving them just the right distance to allow of the flower-stems as they appear to swing clear of each other and showing a little green carpet beneath. I have generally found room for our stock of succulents on a rather poor border that was partially filled with the pink alpine *Phlox*.  
E. BURRELL.

*Claremont.*

**Calla (*Richardia*) *æthiopica* as an aquatic.**—Although occasionally this *Calla* is utilised as a waterside and bog plant, it is surprising it is so little grown as a hardy aquatic, for hardy as such

it certainly is, and a most noble one as well. We have large clumps of it in an artificial lake of eleven acres in extent at a considerable elevation, where they have grown strongly and flowered freely for years, and a number of fresh clumps are annually added—surplus stock of friends who grow them in the orthodox way. Old hampers and such like things are filled with good soil, in which the roots are planted, thence from a boat they are dropped in where the depth of water ranges from 2 feet to 3 feet, and left to take care of themselves. Ere the old baskets are rotten the Lilies have rooted through them and taken hold of the mud and leafy accumulations, of which there is abundance overlying the bottom of the lake, for it is nearly surrounded with extensive Oak woods, and is fed by mountain streams. During the summer months the tufts of lively green foliage interspersed with the noble white spathes are objects of attraction and admiration, and form worthy companions to the peerless white Lilies. This is not a case where extreme mildness of the winter should count in their favour, for skating is almost annually indulged in on the lake, and this year this exhilarating pastime was carried on—and off—for over six weeks. Still, we have no qualms of fear as to the well-being of the Callas in their watery bed, for undoubtedly they will come up and bloom in due course as hitherto. I hope those possessing, or having the management of ornamental waters will muster enough courage to give Callas a trial, for assuredly the result will be satisfactory. Would that the beautiful Calla Elliottiana would become sufficiently plentiful and cheap for employing in the same way.—J. R.

## THE WEEK'S WORK.

### FRUIT HOUSES.

**THINNING GRAPES.**—In early houses the thinning is now an important work, and as such kinds as Foster's Seedling, Black Hamburg, and other early varieties will need constant attention, there should be no delay. To become an adept at thinning, a good eye is necessary to judge of the formation of bunch, as even in Black Hamburg the bunches differ, some being looser than others, so that a strict rule cannot be followed as regards the work. The operator should have a knowledge of the various varieties. Some are very shy setters, and uniform thinning would result in many bunches being too thin. Beginners should proceed carefully and first practise with the free-setting kinds. It is safe to thin twice: firstly when the Grapes are the size of small round Peas, or say a Peppercorn, and again from two to three weeks later, as at that period any stoneless berries or misplaced ones can be removed and more attention paid to tying up the bunches, although I am of opinion many young beginners pay too much attention to this point, as many bunches do not require it if well thinned. Of course, to get exhibition bunches, it is necessary, but these are taken in hand by those who require little advice of any kind. In thinning, the season should be taken into account; summer or early Grapes require less thinning than those required to hang a long time. Close, compact-growing kinds which set thickly are more troublesome, and as these often produce large berries early thinning is important. In many instances I have found it necessary to thin as soon as set, again in a fortnight, and to look over the bunches before the final swelling to remove badly-placed berries, and with late-keeping Grapes to allow sufficient room so that there is no possible chance of the berries binding each other. If at all thick, such bunches will not keep, but soon get mouldy in the centre. Gros Colman, for instance, when well grown produces such large berries, that it is often left too thick, and three thinnings are not too much for late kinds such as described above. In thinning, the operator should begin at the point of the bunch and work upwards, never touching the berries with the hand and using a small

peg or stick to steady the bunch. Any part of the bunch touched by the hair or clothes sets rusty, and in thinning, thoroughly clear out of the bunch blind and small berries at the start or first thinning. The best time to thin is early in the day, but it can be done later, as one can often shade while the work is proceeding. Many are obliged to thin in the evening, as pressure of work does not permit the work to be done in the day. More care is necessary at night, as the houses have more moisture and the berries, if much handled, are robbed of their bloom.

**RUST ON GRAPES.**—This often occurs at this period of the year, and in some houses is worse than others. Iron houses, specially old structures, are bad and more troublesome to keep clear, as the frames of the houses are so contracted by heat and cold and admit such volumes of cold air when the wind is north or east. Early Grapes in such structures are subject to extremes. Sulphur in any form is most injurious, and is often the cause of rust when least expected. If the pipes the previous season were covered with sulphur, the undersides often retain a portion of the sulphur, or there may be portions out of sight. When the pipes are heated and the Grapes are small, they give off sulphur fumes which rust the berries when such fumes cannot escape. Sulphur is often used to counteract red spider, but until the skin of the Grapes is hard it is dangerous. I would advise a little warm water with tobacco or soft soap, sponging the affected parts. Again, many vineries have doors at the side or back, and if not carefully opened admit cold air, which causes rust. Excessive ventilation and syringing have the same tendency. It is scarcely necessary to add that handling of the bunches when thinning is equally injurious, and it will be found that early Grapes suffer from rust much more than others. This pest disfigures the berries, prevents swelling, and spreads if not taken notice of. Many Vines have the rods so close to the glass, that the shoots are subjected to extremes of temperature, this causing a warty growth on the leaves—often, too, mildew. In such houses much could be done by suspending the rods for a time till the weather is more genial with a free circulation of air both day and night.

**PLANTING VINES.**—At this season many Grape growers plant cut-back Vines and in a short time get heavy crops. Planting will be later than usual, not because the plants are later, but through trouble in getting the border into condition, as for some weeks soils have been quite frost-bound. As most growers are aware, the Vine does not push out new roots when the sap is rising, not until there is new wood. This will allow the Vines some few weeks' start, but when cut-back canes are used, plant when the shoots are about 3 inches long, just when new roots are forming. At planting well shake out the roots and spread them out evenly. Avoid deep planting, but in all cases make the soil firm both before and after planting. To prevent undue delay in planting, if the soil should have been in the open, prepare the surface soil or portion next the roots by placing in a warm house and having the lower portion more exposed to the border. Such soil will be fit for planting much sooner than when the border was made at once or in greater bulk. If ripened canes are planted these are often purchased when from 6 feet to 8 feet long, and they are not often required of such a length, but cutting back now is out of the question. If the canes be strong there would be great loss of vigour from bleeding. The best practice is to rub all buds off down to the height required and cut away the naked portion when the new growths are well advanced. These remarks apply more at this date to Vines planted in outside borders, and in most cases there will be no gain by very early planting, the outside soil being very cold. If planted early, protection should be given, a slight hotbed being of great benefit when placed over the roots so as to start them.

**GRAFTING VINES.**—The season is at hand for this work. Many growers now adopt what is termed bottle-grafting, which is simple, no time

being lost in getting the new portion to make a quick growth. Those who require to change any variety can quickly do so; others again can put a new variety on an old stock and gain much time by the operation. The Black Hamburg and Muscat of Alexandria are well-known stocks for grafting, though I need scarcely remark that others are equally suitable. Some excellent results have been obtained from diverse stocks, but in a calendar note as to the utility of grafting the question of stocks does not occur. Scions for use during the next few weeks should be kept quiet till about ten days before grafting. Plunge them in the open ground and place in heat at the time named so as to gently excite the sap. The grafts may be attached to the old rods or to good lateral growth. I advise the latter whenever practicable. The grafts should be fitted together and a slice taken off the scion a few inches long, a corresponding slice being taken off the stock, which should be cut a little deep at the lower portion and a similar cut made in an upward direction in the graft. This is termed tonguing, and gives each a grip. There should be two good buds above the cut or upper portion of the graft, and a length of from 4 inches to 6 inches under the tie or clay. Insert this part in a bottle kept full of water tied to the Vine, this supporting the graft till the union with the stock is firmly made, and the bottle may be left till the Vines have finished growth, when a neat cut may be made. Remove the useless lower wood which supplied the moisture, firmly bind the graft to the stock by matting or coarse cotton, and cover over with clay or prepared grafting wax.

**INARCHING VINES.**—This is only another means of attaining the same end as advised above. This operation can be done with ripened wood or new growth, and if with ripened canes the wood should be on the point of breaking freely, that is, the sap well advanced. Place two portions of growing Vines together, cuts being made as advised for bottle-grafting. Tie firmly together and cover with clay or wax, the upper portion or part above the buds or shoots required to grow not being allowed to make strong shoots. Stop at the fourth leaf, otherwise inarching will prove a failure. To be successful, a pot Vine is generally used for inarching; place it in position against the older Vine. With green wood, inarching with strong pot Vines is often practised, but the wood must not be too soft, rather firm, but not set, what one would term half grown. A slight portion of both stock and scion is cut, the two being neatly fitted together and treated as described for ripened wood. Keep the portion moist, the scion soon taking the lead. The growth from the stock must be stopped at the third joint to allow the scion to grow freely. G. WYTHES.

### THE KITCHEN GARDEN.

**PLANTING POTATOES.**—Although extra care in planting and sowing for first early crops will this year be necessary, all who have warm sheltered borders may now venture to get in prepared tubers of such Potatoes as Sharpe's Victor, Ring-leader, Maximus, or any of the favourite Ashleaf section. I say prepared, as although some do not believe in sprouting early Potatoes, I have myself proved its advantages. The tubers should not be brought forward in Peach houses and vineries, as in the case of frame-planted ones, but in an ordinary greenhouse, so that they are hard and durable, and not liable to feel the fluctuations in temperature likely to occur after being planted. Of course this batch will need protection when through the surface; indeed, I always give it at planting time by employing wooden troughs which stand between the rows in the daytime and are placed over them at night. These keep the ground from freezing and help to retain any sun-heat communicated to the border during the day. Beware of deep planting. Merely draw drills sufficiently deep to allow of the seed being nicely covered. If these are drawn in the forenoon of a fine sunny day and allowed to stand open till the afternoon they will not only be dry, but warm, and

the tubers will have a better start. If potting shed refuse, edgings of walks and drives, burnt refuse and leaf mould were prepared and kept dry as advised earlier in the year, they will now be found invaluable for use in the Potato drills. I prefer to leave about three strong sprouts to each tuber. Some advise two only, but sometimes some of them are eaten off by grubs or fail from some unforeseen cause, and then blanks occur; besides, a fair amount of foliage is essential in these extra early crops to promote a satisfactory root action. I have known good dishes secured by planting between trees close up to south walls, merely inserting the seed a couple of inches deep, and afterwards covering with light soil especially prepared for the purpose, the haulm being shielded from frost by Bracken or litter. In regard to the main crop of garden Potatoes, planting in the majority of cases had better be deferred for the present, as the plots intended for their reception are generally less favoured with warmth from sun heat and the tubers lie inactive for some time, suffering in consequence. The first week in April is a good time for planting these, and even then growth frequently falls a victim to late frosts. Where rough boxes of moderate depth can be made on the premises, some of the more advanced tubers of the early border section may well be planted in these, being then brought on in light positions in orchard houses or late Peach houses as near the glass as possible. These will prevent the probability of a break in the supply between the second frame batches and those from the open air. If a few rows of Sutton's Seedling and Puritan be planted now they will follow quickly on the heels of Victor, Ringleader and Maximus. Any new scarce variety may be made the most of by cutting the tubers into sections, each of these being furnished with one or more eyes. When this is practised it should be done some days before planting and the cut portions exposed to the action of light and air to enable them to dry and in part colour. Some dry sandy soil ought also be placed round them in the drills. If a little soot be incorporated it will aid in keeping slugs off, as these pests often injure divided sets. For all first early short-topped varieties a distance of from 15 inches to 18 inches between the rows, and 9 inches or 10 inches from set to set is sufficient.

**EARLIEST FORCED POTATOES.**—December-planted lots occupying pits and frames will now be coming on apace, the haulm needing support by means of short twigs and the roots increased supplies of moisture supplied in a lukewarm state. A little guano stirred into the surface and watered home is an effectual stimulant, the ammonia arising therefore seeming also to feed and strengthen the foliage. Early closing, so as to husband sun-heat, must be practised until growth assumes a yellowish tint and the tubers are fit to lift. Plenty of fresh air must be admitted on fine days, increasing it at intervals from breakfast-time till noon, and on no account must good night coverings be neglected, even though it be fine and mild at dusk. Any roots which were not forward enough for earthing when the main portion was done must now be seen to, fresh soil being added to the surface rather than mangling the roots by disturbing that between the rows. I always earth up as little as possible, as much soil keeps the roots cold and does incalculable harm. Very forward Potatoes in pots growing in Peach houses or other intermediate structures will already have small tubers forming which will be large enough for use in April. Another and final sprinkling of artificial manure may now be given, and where the tops have run up to an unusual height the leads may be pinched off; this will strengthen the stems and improve the crop generally.

**TRANSPLANTING CAULIFLOWERS.**—Those who still adopt the good old method of planting a number of Cauliflowers of the Early London and Walcheren type in handlights in October usually allow five plants to each light to start with, with a view to thinning out in spring. Where the plants withstood the late severe frost transplant-

ing may now take place. Some leave one at each corner of the light and remove the centre one only, but where the plants are healthy and the land rich this space is scarcely sufficient for the Walcheren, which as a rule grows thicker in the stem and produces larger leaves than Early London. I always leave the three best plants in the handlight and remove the rest for making extra rows, lifting them carefully and planting on light warm soil, dug or trenched in autumn, and scullied several times with forks on sunny days to warm the surface. As March-transplanted Cauliflowers seldom attain to their normal size, 18 inches between the rows and 15 inches from plant to plant will be ample. Lower the balls well to steady the stems, as winds are apt to loosen them at the base, and if once they sway to and fro they seldom do any



Border of fine-leaved early plants, Bulrick, 1894.

good. Protect well with Spruce, Laurel, or Yew boughs, and in case of mild showery weather watch regularly for slugs, dusting between the plants with equal parts lime and wood ashes on their first appearance. In many places handlight plants have been killed, and where this is so the soil within should be well stirred with a hand-fork and the tops allowed to remain on for a few days. It will then be thoroughly warm and in readiness for plants that have been wintered in frames and pits. If these were allowed a moderate depth of soil only, and that somewhat retentive, a layer of manure being under it, on a hard ash bottom, they should lift well with care and suffer but little from the removal. It will be as well to leave the tops of the lights on crossways for a week, after which full exposure on calm fine days will suit

them best. If any plants have been wintered in pots, they may be planted on the most exposed plots, being better able to stand removal than lifted plants.

**CABBAGES.**—Fortunately, the plants in many seed beds were well covered with snow, and so were saved from destruction. As green vegetables are sure to be very scarce, all spare ground should be filled up with the best of the plants, carrying out the work with due care, and drawing up a little earth to the stems, as they are sure to be somewhat leggy. If such Cabbages do not attain to their normal size, which they can hardly be expected to do, not having been previously pricked out, yet they will come in at a most acceptable time, proving most useful. All autumn-planted quarters of Ellam's and other first early sorts should again be gone through, firming being necessary. The Dutch hoe should also be run through the rows, a good sprinkling of artificial manure being first given.

**SECOND EARLIEST CARROTS.**—Where Carrots are in constant demand for soups it is a good plan to sow a few rows of the early stump-rooted section now, as the early protected bed of French or Parisian Forcing sown in February is liable to be much thinned by grubs, fly, or even wireworm. I would advise the sowing of an equal quantity of Market Favourite, Early Gem, and the old Nantes Horn. The first named will lead the way by long odds. Nantes will follow, and Early Gem keep up the supply. No manure, a surface rendered fine by repeated scuffing, and a fairly sunny aspect are the chief necessities for this special crop. Wood ashes may be freely used over the seed before the slight drill is filled in, and the soil made firm by treading and re-treading. The main crop sowings must be deferred until April, and for early, mid-season, and latest crop more seed than usual sown, as it was harvested in an unsatisfactory condition last season.

**SEEDLING LETTUCE.**—Few even of the so-called hardy old Brown Cos planted out under walls last October have survived even where afforded a little protection. Young seedlings, therefore, which were sown in heat in January or February will need special care in order to save them from becoming leggy or damping off. Presuming that due thinning was performed as soon as they could be handled, and that they were removed from their germinating quarters to a temperature a few degrees less, they will now be in a fit condition for pricking out into boxes or on a slight hot-bed, preferably the latter. Let the soil be fairly rich and made firm, pricking out about 4 inches apart and keeping the frame close for a few days. After this a confined atmosphere must be avoided, all the air possible being admitted by tilted lights until free growth has commenced, when their entire removal on fine days will be imperative. If a spare light or two is at hand, All the Year Round may be allowed to mature in them, this being of very rapid growth and much esteemed for salad.

**UNPROTECTED RADISHES.**—The time has now arrived when open-air sowings of Wood's Frame and French Breakfast may be made without the necessity of covering at night. Choose an open sunny spot and work it well with a fork to secure dryness, sow broadcast and cover but slightly, finally treading and raking the surface, and fixing a fish-net over the bed for protection from chaffinches. If this is neglected in wooded districts not one seed will be left.

**BEANS FOR COOL FRAMES.**—Although not generally practised, it is a good plan to sow a batch or two of French Beans in pots, at first giving them comfortable quarters, and as soon as 3 inches of growth have been made, remove them to a frame which can be kept rather close for a time and be well covered at night till the second or third week in April, when they may be finally transplanted into cool pits or home-made frames, any spare odd lights being used to cover them. A 4-inch pot is the best size to sow in, and this should be done thinly, as, unlike those transplanted into heated beds, they do not like to be separated. A sunny nook or corner sheltered by







fruit or plant houses or high walls, and having a due south aspect, is necessary. The soil must be thrown into the frames some time before planting takes place so as to be well warmed. This is most important, as, if planted in cold compost, French Beans not only do indifferently, but frequently canker at the base of the stem and naturally rot. A little guano stirred in helps them much, it being of a warm nature. Fowls' manure incorporated with fine soil in winter and stored away in a dry shed is also an excellent stimulant for Beans and all heat-loving crops. They should be planted far enough apart in the rows to allow of a slight earthing-up, as then the tops will not need the aid of sticks. Newington Wonder, Syon House, and Mohawk are all excellent for this sowing, being hardier than most other sorts and not growing too tall.

**ENDIVE.**—Lettuce being so scarce, those who have still a good frame of Bread-leaved Endive are fortunate. In order to make the most of it, remove it to a north aspect and bed the balls in quite dry soil or leaf mould; wet soil would encourage rot in such a position. This removal will prevent it running to seed, which it is apt to do at this date when in a sunny place. Do not draw off the lights, but merely tilt them, as if once rain falls on the leaves and gets into the heart it will perish in such a position.

**ROOT SHED.**—This should now have its final overhauling, as many things, notably Salsafy and Scorzonera, will be losing their vitality and shrivelling. In order to stay this as much as possible, relay in fresh soil containing a good amount of moisture. J. CRAWFORD.

## GARDEN FLORA.

### PLATE 1006.

#### TALL RUDBECKIAS.

(WITH A COLOURED PLATE OF R. NITIDA.\*)

THE tall Rudbeckias are useful in the garden during late summer and early autumn, especially if they are taken out of the mixed border with its usual restriction and planted in masses among shrubs or grouped in a free and simple way. Large groups of such easily grown free-flowering plants as these are most valuable for creating distinct effects of colour even in distant parts of the garden.

**R. NITIDA**, here figured, is one of the handsomest of the tall-growing kinds, and though by no means new, it is decidedly rare in gardens. It has large leaves of a decided glaucous tint, and its flower-spikes reach a height of about 6 feet. The spikes are few-flowered, but the flowers individually are of fine size, rich yellow in colour, with the disc florets disposed in a cone-like receptacle. Doubtless the illustration here given will cause some attention to be bestowed upon a neglected, but admirable species. It is also known under the name of *levigata*.

**R. LACINIATA** is another handsome species which grows 6 feet or more in height, and has been thought a poor weedy subject when seen as a half-starved tuft standing in the same place a decade or more. Planted as advised above and new groups made from time to time, it is a brilliant late summer flower. Its leaves are deeply cut and the flower-spikes bear many flowers, not quite so large as those of the preceding kind, but of a soft clear yellow colour.

**R. CALIFORNICA**, another fine species, growing about 6 feet high, has flowers of a rich yellow colour, larger and broader in the petal than those of *laciniata*, with a distinct cone in the centre like an Acorn.

**R. MAXIMA** is one of the largest cone flowers, and in rich soil grows as high as 9 feet. Usually,

\* Drawn for THE GARDEN by H. G. Moon in Messrs. Barr's nursery, Long Ditton. Lithographed and printed by Guillaume Severeys.

however, it does not exceed 6 feet in height. It has large oval leaves; the lower ones, borne on long stems, are of a distinct glaucous green shade. The stems are often terminated by one large bloom, but if branched they only produce a few flowers each on a naked stem 15 inches to 18 inches long. The long ray petals droop when the flower is fully expanded and accentuate the characteristic effect of the cone in the centre, which projects sometimes as much as 2 inches above the yellow rays.

A. H.

## KITCHEN GARDEN.

### EARLY & LATE PLANTING OF POTATOES.

ON all sides one hears of the determination of growers to defer the planting of the main crop until later than has been the custom. This determination is a wise one. Apart from the fact that the late planter stands a better chance of his crop escaping the action of the frost, it gives him a longer time to prepare the ground, and therefore it is likely to be in better condition to receive the sets. One cannot but think that many growers have been long in learning this lesson, but it seems now that the destruction of the haulm by the frost last season has brought it home to them in a forcible manner. Anxiety appears to be directed now as to the latest time it is safe to defer the planting without prejudice to the crop. Locality, I think, should decide this point in most cases. Here in the west of England very excellent crops are obtained by planting at the end—or thereabouts—of the third week in April. But here again the district may be advantageously taken into account. In hilly districts it is quite safe to plant ten days earlier than in the valleys. I may also direct attention to a point that has often been urged before. I refer to planting the late varieties first and the early sorts last. There is a good deal of reason in this, because it enables the cultivator to push on the work of planting earlier than he otherwise could. It is quite clear that more attention should be given to the preparation of the sets, and the sooner that is set about the better. Those who have them in caves or stored in close frost-proof structures should get them uncovered, and, if possible, spread out thinly on the floor of some building where they will be safe from frost. The thinner they lie the better condition they will be in for planting. If light and air can reach the sets in mild weather it will be an advantage, as they will be kept cooler, and consequently will not become exhausted by sprouting. In their anxiety to keep Potato sets free from the late severe frost many people placed their stock in barrels and boxes and stored them away in warm sheds and other safe places. Such a step was a wise one and all very well while the frost lasted, but if they are kept in such places long after the frost has left us, the sets will begin to sprout and all the shoots will have to be rubbed off to separate them. The result will be a considerable weakening of the sets. The stock of tubers for seed will well repay for going over now, and wherever the conditions are likely to promote an early growth the sets should be removed to cooler and more airy quarters.

Opinions appear to differ somewhat as to the value of large sets over small ones. This is a question that should be decided by the condition of the ground. If it has been well prepared, then moderately sized sets are equal to large ones. In no case do I favour selecting small ones, but in indifferently prepared land

rather large sets will always give better returns than small ones. The same kind of reasoning holds good with regard to cut sets. In well cultivated soil cut sets are equal to whole ones, but where the land is crude and lumpy uncut tubers are decidedly the best. Very few large growers in the west of England—and there are many that plant from ten to twenty acres—cut their sets. If they cut any it is only the largest, and these invariably have the best position in the field. J. C. CLARKE.

**Sutton's Favourite Lettuce.**—This is one of the best Lettuces for summer use, the hearts being very crisp and solid. For withstanding the drought also it is of much value.

**Good Broccoli in winter.**—Last season and this have been the only two years I have been able to cut Snow's Winter White at Christmas from the open ground. I am not so fond of this variety as Veitch's Self-protecting Autumn Broccoli. By sowing this early in April and again a month later there is a succession, and one is more independent of Snow's, which is more variable as to turning in. At page 41 "W. G. C." says Veitch's Self-protecting never disappointed him. Such is my experience, and I only wish we had as reliable varieties for January, February and March. I admit such varieties as Model and The Queen are reliable, but these are spring kinds and equally valuable as the Protecting Autumn variety. Even these fail in severe winters if not protected. Unless one can command frames it is useless to place late kinds in sheds or in a dark place, as they do not form their heads. "W. G. C." does not mention Leamington, a self-protecting February Broccoli. This I find hardier than others. Cooling's Matchless is also fine for March, but, as previously stated, I cannot say they are quite hardy.—S. M.

**Cauliflower Pearl.**—So far I am very pleased with the behaviour of the young plants of this variety sown in autumn, and wintered under glasses and in frames. While many of the older sorts have already buttoned, not a single plant of Pearl shows any tendency to do so. The centres are keeping close and erect—always a good sign at this period, as if once these commence to spread out, buttoning prematurely is almost certain to follow. The plants of Pearl seem also to be pretty hardy, being very little damaged by the recent severe frost. This variety comes in just after Walcheren and Early London, which is just what is wanted, as when once these early batches commence to heart in, they do so with a rush and are soon over. Throughout the spring and summer a little of Walcheren and Pearl should be sown at each sowing, half of each being finally planted out, and thus a succession secured.—J. C.

**Early market Peas.**—In market gardens in this district the first crops of Peas are now above ground. Growers for profit are naturally anxious to be as early as possible, for one week only makes at the present time a great difference in the price. The first consignments will make about 15s. per bushel, but this high figure cannot, owing to the enormous acreage given up to Pea culture now-a-days, be long maintained. In the course of a fortnight the price will often drop to less than one-third of that amount. The light soils of this part of Surrey favour the production of early Peas, but there is, of course, a great element of uncertainty about them. Sometimes melting snow succeeded immediately by severe frost will completely ruin large breadths. I have known one man lose 20 acres in this way. Those who grow Peas in a large way can afford to speculate, and if an early crop fails in this manner, there is time enough to make a fresh sowing, and it is merely an affair of the cost of seed and labour. Even if the very early sowings pass safely through the winter they have spring frosts to contend with. Last season the early crops in the home counties were to a great extent destroyed, thousands of pounds' worth being lost to

the cultivators of this esculent. In a general way the early part of February is soon enough to commence sowing, and crops put in at that time will frequently overtake those sown six weeks earlier, and in nine cases out of ten the yield will be more satisfactory.—J. C., *Bygfoot*.

**French Beans.**—The more of these brought on under glass the better, as, arriving at maturity in a short time, nothing is better for filling such a gap as must occur in early outdoor produce this year. Now that the season is getting advanced a stove temperature is not needed for successional batches, so that any intermediate house where pots or home-made boxes can be accommodated and placed where the light and sun can reach them will answer. *Ne Plus Ultra* and that good old variety *Syon House* are, perhaps, the two best for the purpose. If these are sown thinly in rather large pots, and judiciously fed as soon as the first pods are formed, they will continue to yield for a long time. Do not give much water until growth appears, to avoid rot. Support with stout branching sticks when about 9 inches high, and if there is any probability of the haulm out-distancing the supports, pinch the leads. Fill up the pots or boxes with soil at the start, leaving no margin for earthing up, as this process, while involving extra labour, is of no benefit whatever. In order to keep the foliage free from spider, syringe the underside freely on fine days. *Ne Plus Ultra* may now be sown where more heat is applied in addition to *Syon House*, larger pots being used all round, and more manure added to the soil at sowing time than is advisable for the earlier batches.

**Forcing Carrots.**—The correspondence on the merits of different varieties for forcing has been very reasonable and interesting, and I should like to add one more sort to those already named, as I believe it has not been mentioned. It is *Holborn Long Forcing*, and when it becomes better known will be in considerable demand, as it combines great earliness, fine quality, and a desirable shape. Most of the early Carrots are of the *Scarlet Horn* type, but the above is more after the intermediate class, and for that reason will be in favour on many gentlemen's tables. It grows as quickly as the earliest varieties, and is a decided acquisition to those gardeners who are expected to supply long tender roots about the size of a rat's tail for as long a season as possible.—W. G. C.

#### GREEN VEGETABLES.

GREEN vegetables of all kinds will be scarcer this spring than has been the case for many years. I do not remember to have witnessed such destruction among winter greens. Brussels Sprouts, generally so reliable, are quite ruined. Broccoli has not a particle of life in it, and the hardy Kale family is so crippled as to be of but little use. Even Turnip greens, on which one can in a general way rely for an abundant supply of fresh greens in early spring, will be scarce, whole fields of roots being reduced to pulp. What makes the matter worse is that autumn-planted Cabbages are either killed off or in such a plight that we cannot expect much from them. Large breadths of Peas are completely ruined, so that gathering will be delayed for several weeks. Those who have the command of artificial warmth should at once sow some *Heartwell Early Marrow Cabbage*, or when this convenience does not exist, the seeds may be raised in a cool greenhouse or sown broadcast in a frame. The plants, if hardened off and set out in rich ground, will make rapid progress. Spring-raised Cabbages will frequently overtake those put out in autumn, especially if they are carefully transplanted and watered in dry weather. They may be set out about 8 inches apart if plenty of plants are at command, and every other one can be cut when half grown. This will give a supply of young greens quite a fortnight sooner than would be the case if one waits until the plants are well hearted. Swede greens are by no means to be despised in a season like this. Though not so delicate in flavour as Turnip greens, they are

tender and very wholesome. Those who have the opportunity should get a bushel or two of roots and plant them in a sheltered spot. They will soon start into growth and will furnish a supply of succulent greens. Spinach should be sown at intervals of ten days, and if a good breadth of Rape is put in there will be something to rely on till the young Cabbages are ready. Rape is really a tender, toothsome and wholesome vegetable.

*Bygfoot.*

J. C.

## ORCHIDS.

### DENDROBIUMS.

ONE might almost be satisfied with a good collection of these Orchids alone, so varied are the habits of growth, manner of flowering and colour of the blossoms. The majority of the species come from the tropics and may be accommodated in one house, with a little care in arrangement and slightly differing treatment for the various species. The best known of the genus is that section with cylindrical pseudo-bulbs of varying length and thickness, from the tiny growing *D. pulchellum* to the large and noble *D. Dalhousianum* and *D. moschatum*. Between these there are many intermediate forms. Some are evergreen, as *D. Brymerianum*; some lose their leaves in autumn, as *D. Bensonianum* and *D. Wardianum*; while others, such as *D. nobile*, though not strictly deciduous, usually lose their leaves the second year. All these, with the exceptions noted below, require a brisk moist heat during the growing season with an abundance of sunlight, the blinds being let down during the hottest part of the day only. The house should be closed early during this period and the blinds drawn up, so that the temperature rises in the middle of summer to 100° or more, the plants being well syringed overhead and every available space damped to cause a thoroughly humid atmosphere, the moisture settling on the glass and preventing scorching of the foliage. As soon as possible in autumn, when the growths are approaching completion, the shading must be entirely dispensed with and the plants arranged as near the glass as possible to thoroughly ripen and consolidate the stems. By the time the last leaf is produced on such as *D. Wardianum* the stems should be hard and scaly in appearance, betokening that all that is necessary to ensure a beautiful bloom in spring is a long period of dry rest in a cool house. There should be no hurry in removing these plants from the house in which they have been growing. It is far better not to remove them at all than to do so too early, for if the temperature is decreased before the pseudo-bulbs are thoroughly ripened, but few flowers will be produced, and even these will not be of good quality. When they are, however, quite finished the temperature can be gradually lessened, at the same time reducing the supply of water at the roots as the leaves fall, until in winter, when the stems are bare, little or none will be needed. The evergreen species with stem-like pseudo-bulbs will not require quite so much drying in the winter, otherwise the treatment of these may be identical with that of the deciduous section. Those with shorter pseudo-bulbs bearing the leaves chiefly near the top, as *D. densiflorum* and *D. chrysotoxum*, will be better arranged a little farther from the glass, and, although requiring plenty of light, need not be subjected to such a high temperature in autumn. These do best during winter kept in the house in which they are grown, and should be moderately moist at the roots all through the season. *D. speciosum* is an exception to this rule, as, unless the growth

of this is well ripened, no flowers will be produced. When the pseudo-bulbs of this kind are finished the plants may be turned out of doors for a time and there kept until there is a danger of early frosts. Our plants are usually out until the middle of September, with a mat or some light protection on cold nights, and these never fail to flower profusely. *D. formosum*, *D. eburneum*, *D. infundibulum* and *D. Jamesianum* seem never to rest, and it is best to let them have their own way, not drying them much at any season, but watering according to the state of growth. The two first-mentioned species of this—the *nigro-hirsute* group—delight in a strong, moist heat and plenty of sunlight, but the latter kinds are better kept cool. They will grow with the *Odontoglossums*, but thrive better in a rather higher temperature, or such as suits the Mexican *Laelias*. They should be grown in small pots, and nothing stagnant or sour must be allowed about the roots. By the appearance of the roots a fairly good idea may be obtained as to the size of pot or basket and the description of compost best suited to the various kinds. Take *D. Devonianum*, for instance; its roots are small and do not seem inclined to push far in search of moisture, preferring rather to grow closely matted together. Clearly a large pot would be a mistake here, what is required being a small one, with the compost used in a much finer condition than for *D. nobile* or *D. Brymerianum*, whose roots are larger and more ambitious, liking a large pot, with good rough lumps of charcoal, potsherds and turfy peat. There may be exceptions to this rule, but, taken as a guide, it will not lead the cultivator far wrong.

R. S.

**Sickly Dendrobiums** (*J. A. Dearden*).—If the temperature has not fallen lower than 45°, the mischief has undoubtedly been caused by the fogs, which render the culture of these delicately textured Orchids yearly more and more difficult in the vicinity of large manufacturing towns. This temperature is, however, far too low for *Dendrobiums* with flowers so far advanced as those you send, and if accompanied by much atmospheric moisture would be very detrimental. Keep the roof glass clean by frequent mopping or a stream of water from the hose, change the air in the houses daily and as early in the morning as possible without lowering the temperature. The action of the sun upon the plants with the night moisture about them is often productive of injury to delicate flowers and young growing shoots, and if a little air is given early in the morning it dissipates this and mitigates the evil.—H. R.

**Cypripedium villosum aureum.**—I have received a very fine flower of this variety from Mr. J. Crispin, of Chester Park, Fishponds, near Bristol, who says the plant from which it was cut was somewhat checked by removal for exhibition. The flower, nevertheless, measures 5 inches across the petals, which are broad and of great substance; the upper portion of these and the lip are suffused with bright yellow. The dorsal sepal is very much broader than in the type, measuring about 2 inches across. The broad, deep purple line extends more than half-way up, while the ground colour is a greenish-yellow, fading to white at the apex and margin. The flower is very massive and this fine variety possesses all the well-known good points of the type. A very fine plant of this variety was recently in bloom in the Hornham Cliff collection, the flowers being very large and bright in colour.—H. R.

**Goodyera discolor.**—This Orchid is admirably adapted for growing in a warm, moist and shady stove, the leaves taking on a most delightful velvety sheen, which shows to great advantage associated with *Fittonias* and other brightly-coloured plants of a similar habit. The flowers are not large, but very pretty, and the spikes when thrown well up—as on strong plants

they would be—are very attractive at a dull season, *i.e.*, from December onwards to April. The flowers are pure white, with a yellow column; the leaves broad at the base, rounded, and tapering to a point. They are green on the upper surface, with a silvery-white midrib, the underside being reddish or purple. Few Orchids are more easily propagated than this. If a couple of good stock plants in large pans can be procured they may be cut over biennially and a good stock gradually worked up. The growths may be taken off with as many roots as possible attached, at the same time leaving as much as convenient of the rhizome to produce breaks for another season. These may be placed in pots or pans of varying sizes, from six to eight being placed in the 8-inch size, with less or more for smaller or larger pots. These may be placed in a brisk, moist heat in the stove or in a propagating case not kept too close. Water must be carefully given until the roots are beginning to run in the compost; afterwards a good supply will be necessary, as the plants grow quickly and require plenty of nutriment. The compost should consist of equal parts of good peat, fibrous loam and chopped Sphagnum Moss, with enough finely-broken potsherds to prevent closeness. In the winter the plants must be kept somewhat drier at the root, but not sufficiently so to cause injury to the foliage.—H. R.

#### GALEANDRAS.

This genus of deciduous terrestrial Orchids is not represented in our collections so much as it really deserves, for although there are some species possessing but little beauty, there are also some with lovely blossoms. Galeandras are closely allied to Eulophias and Lissochilus, the principal distinction being in the formation of the lip, which is contracted into a broad funnel-shaped spur. There are not more than about half a dozen species known to cultivation, and these are all natives of Tropical America; therefore they require strong heat and plenty of moisture to grow them successfully in our gardens. Whilst in active growth these plants thrive best in the East India house, where they should be supplied with plenty of water at the roots and the atmosphere well charged with moisture. When the flowers appear, a cooler and drier temperature, such as that of the Cattleya house, will suit them best, and where they should be allowed to remain for a period of rest. Being deciduous plants, the leaves turn yellow and drop off in the autumn, and as soon as the foliage commences to change colour water must be gradually diminished, and only sufficient given to keep the bulbs in a plump and healthy condition. Naturally these plants grow in well-decayed leaf-mould, but the best results can be obtained by using a compost consisting of good fibrous peat and Sphagnum Moss to which should be added some good decomposed leaf-mould. The pots should be thoroughly drained, and when repotted the plants should be elevated somewhat above the rim. Galeandras have been found somewhat difficult to cultivate, which is no doubt the cause of their not finding so much favour as many other kinds of Orchids. They require great attention throughout the year, especially in watering and keeping clean, for whilst in growth the foliage is very susceptible to the attacks of red spider and thrips, which cause much damage if not quickly removed. The finest species in this genus is certainly

*G. DEVONIANA*, a native of the banks of the Rio Negro. It there attains a height of 5 feet and 6 feet, but under cultivation it seldom reaches much above 2 feet high. The pseudo-bulbs are slender and erect, clothed in a young state with lanceolate sheathing leaves. The peduncle

appears from the top of the stem, and supports a pendent raceme of flowers which individually measure about 4 inches across. These will last a long time in full beauty. The sepals and petals are of a purplish brown colour, usually striped and margined with light green, the tube-like lip white, striped with purple, and forming a handsome contrast to the other dark segments. This fine plant was first discovered by Schomburgk upwards of sixty years ago, but it was not until about thirteen or fourteen years later that living plants arrived in this country.

*G. BAUERI*.—A very rare and desirable plant. This is the typical species upon which the genus was established by Dr. Lindley. It grows to nearly 2 feet in height, and is furnished with fine lanceolate foliage. The flowers are produced on a drooping inflorescence, the sepals and petals being brownish yellow, whilst the lip is yellow, lined with reddish brown. It was first introduced about 1840 by Messrs. Loddiges, of Hackney.

*G. NIVALIS*.—This is also a very desirable and rare plant, which appears to have first flowered in the collection of Sir Trevor Lawrence, Bart., about thirteen years ago. It is also a native of Tropical America and of very dwarf stature, the pseudo-bulbs not growing above a foot in height. The flowers each measure about 2 inches across, the sepals and petals being of a brownish green, whilst the lip is white, with a small purplish blotch in the centre of the base.

*G. BATEMANI*.—A very dwarf growing and distinct plant, which was introduced from Mexico over fifty years ago. It has also been since found in Guatemala. The plant grows to a height of about 6 inches and is furnished with very long leaves, the raceme being similarly produced as in the other species, terminal, and many-flowered. The sepals and petals are similar and of an olive greenish colour; the large lip is purplish rose with a white margin. WM. HUGH GOWER.

*Ceologyne cristata alba*.—The pure white form of this well-known Orchid is not nearly so rare as formerly, but one does not often come across such a fine plant as is now in flower at Hornham Cliff. The plant in question is in a large wooden basket, and is carrying upwards of a dozen spikes, each bearing from four to six of the beautiful pure white blossoms. Other noteworthy Orchids in flower here are *Odontoglossum crispum*, a good variety 4 inches across, the sepals and petals broad, and of the purest glistening white; *Dendrobium primulinum*, a fine specimen covered with flowers; *D. Ainsworthii*, and among other varieties of *D. nobile*, a fine plant of *D. nobile pendulum*, well flowered, but, unfortunately, tied up so that its elegant pendulous habit could not be seen. The flowers of this last are very bright magenta with a deep purple blotch on the labellum.

*Oncidium Cavendishianum*.—The spikes of this species are not so graceful as some others in the genus, but its very distinct appearance, combined with its free-flowering habit and the fact that it blossoms during the winter months are all points in its favour. The species produces no pseudo-bulbs, but grows in tufts of healthy-looking, deep green leaves, from the bases of which the racemes spring. The individual blossoms are upwards of an inch in diameter and thickly produced upon the long branching racemes. They are golden yellow, with spots of chestnut-red. *O. carthaginense* and *O. roseum* are occasionally met with under the name of *Cavendishianum*, but they are quite distinct kinds. A nice form of the golden-lipped variety was in flower in the Hornham Cliff collection recently. *O. Cavendishianum* thrives well in pots, with rather a shallow compost consisting largely of Sphagnum Moss, and should be carefully watered during the winter. It thrives best in a light position in the Cattleya house and lasts many weeks in full beauty.

*Odontoglossum Harryanum*.—This fine Orchid is now plentiful enough to be represented in all collections, and its unique characters and undoubted merits entitle it to this distinction. It

is a native of the United States of Colombia, whence Messrs. Horsman and Co., of Colchester, first received it in 1886. This was, however, a small importation only, it being found in quantity soon after by Messrs. Sander, of St. Albans. *O. Harryanum*, although not difficult to grow, is one of those species that when in good health it is wise to keep it so, for if once the plants get out of condition they are a long while recovering. It dislikes disturbance at the root, and in repotting, a compost that will not become sour should be used. The pots should be clean and well drained and just large enough to take the plants easily. One part of good peat fibre to two of Sphagnum Moss with plenty of finely broken crocks will suit it well, and the base of the leading pseudo-bulbs must be kept a little above the rims. When first imported it should be given a place in the Cattleya house. Even when established it likes a rather higher temperature than the crispum section, although this is not absolutely necessary. I recently saw a very fine plant of this species growing in a house that occasionally fell during the recent severe weather to 40°, and in summer is kept as cool as possible by free ventilation and shading, a house, in fact, wherein the coolest section of the genus does well. The flowers, produced on long racemes, are each from 4 inches to 5 inches across and delicately scented. Sometimes these do not open well, but this is probably owing to weakness, as it is most frequent in plants out of health. The sepals are brown with greenish yellow bars and spots, the petals similar in ground colour, but more freely marked. The lip is quite distinct from that of any other *Odontoglossum*, being large, pure white, marked with blue lines, and with a good deal of yellow about the crest. It flowers at various seasons of the year, and the oft-repeated advice respecting leaving the flowers on the plants too long is specially applicable to this species.—R.

**The Cattleya grub.**—As I have heard several complaints as to the prevalence of this pest this season and also seen its depredations in several collections of Orchids, it may not be out of place to warn inexperienced cultivators to be on the look-out for it and to at once sacrifice the leads that are attacked. No good purpose can be served by leaving them on, but a good deal of mischief may on the other hand be caused, not only on account of the grub itself, but because the longer they are left the less likelihood there is of obtaining good breaks from the affected pseudo-bulbs. The presence of the grub is easily seen by the club-shaped growth, abnormally swollen at the base and pointed at the apex. Newly-imported plants, or those of the second year, appear to suffer most, and all the labiate section seem to be especially subject to it. Some growers are in the habit of fumigating for this pest, others burn lights in the houses to attract the female fly, but it is questionable whether any good results accrue. Prompt action in removing and burning all affected growths, in bad cases taking the plants out of the pots and washing every part in tepid water, are the likeliest means of extermination.—R.

#### THE SCARLET LELIAS.

THOUGH taking this as a heading, I am thinking more particularly of two capital examples of *Laelia harpophylla* of which cut spikes were sent to the last R.H.S. Drill Hall meeting. It is a matter of regret that this showy species is not more plentiful, for it is certainly one of the best when well managed. The two spikes above referred to seem to point to there being two forms, one being quite a major variety. The rich glowing orange-scarlet flowers, practically self-coloured, are at this season a decided acquisition, lasting a considerable time in good condition. It is not one of the most attractive plants when out of flower, but this is not everything. Being of only moderate growth it should be kept well elevated above the pot so that the air can act in a more favourable manner. It is not so compact in its habit as *L. cinnabarina*, but the flower-scape is much shorter,

nor has it been so long in cultivation, having been introduced about 1873. *L. cinnabarina*, on the other hand, has been in cultivation some sixty years, yet this is, like *Lælia harpophylla*, far from common. It forms a good succession to *L. harpophylla*. I have seen it frequently in good condition in May. Mr. Geo. Baker when gardener to Mr. Ambrose Bassett at Stamford Hill used to show it in fine condition in May, and I have also noted it in June also. Its flower-scapes are frequently more than 18 inches in length, the blossoms, clustered towards the apex, being, relatively speaking, smaller than those of *L. harpophylla*. Only a year or two since it received a first-class certificate from the Orchid committee of the R.H.S. *L. flammea* is a scarce hybrid between *L. cinnabarina* and *L. Pilcheri*, being thus a hybrid of the second descent, the latter parent being itself a hybrid between *L. Perrini* and *L. (Cattleya) crispa*. *L. flammea* is also known as *L. Veitchi*; thus its origin is easily detected. It has the sepals and petals of a most vivid orange-scarlet with a crimson-purple lip, thus showing its descent from *L. crispa*. *L. flava* is more strictly speaking a yellow species, but it belongs to the same section, being similar to *L. cinnabarina*, but dwarfier. *L. monophylla* is quite a dwarf species, having relatively small flowers with orange-scarlet sepals and petals, also the labellum. This species is from Jamaica, whereas the others are of Brazilian origin. *L. xanthina*, a summer flowering species, has blooms of an orange shade as large as those of *L. cinnabarina* and flowers in a similar manner. This section of *Lælia* is well worthy of more attention than is at present given it.

## ORCHIDS.

***Lælia superbians.***—A nice piece of this grand species is at present in flower in the Cambridge Lodge collection, where it appears to thrive well, this being the third spike of bloom it has produced in less than two years. The individual blooms measure nearly 6 inches in diameter, and in this plant the flowers appear to be very pale, being of a light rose. The lip is deeper in colour than the other segments and veined with purple, the throat yellow. This species was introduced by the Royal Horticultural Society in 1842, but it appears to have been first discovered by Mr. Ure-Skinner about three years previously in Guatemala.—W.

***Cœlogyne cristata alba.***—This lovely variety of *Cœlogyne* has become more plentiful during recent years. Unfortunately it is of a more straggling habit than the typical form, and therefore does not make such a well-shaped plant. During the present season several well-flowered plants have been noticed, but the finest specimen I have ever seen is now blooming in the Cambridge Lodge collection, Camberwell, where a fine piece measuring upwards of 4 feet through is carrying twenty-nine fine spikes of five and six blooms each. This plant is grown in quite a cool temperature throughout the year in the same structure as *Lycaste Skinneri*, and where the ventilators are always wide open during fine weather, thus proving that it is not necessary to give these Orchids such strong heat as is often recommended.—W.

***Cypripedium concolor.***—This species and its allied kinds have in many instances suffered severely during the past winter in many of our collections through having been placed upon shelves near the glass where the frost has reached them. This would not have happened had the plants been kept in a perfectly dry state. I recently saw a fine batch of *C. niveum*, *C. concolor* and *C. bellatulum*, which had been wintered in a cool house where the ice was inside the house within a couple of inches of the plants. These, however, had been kept dust-dry, and had not received any water from the beginning of Decem-

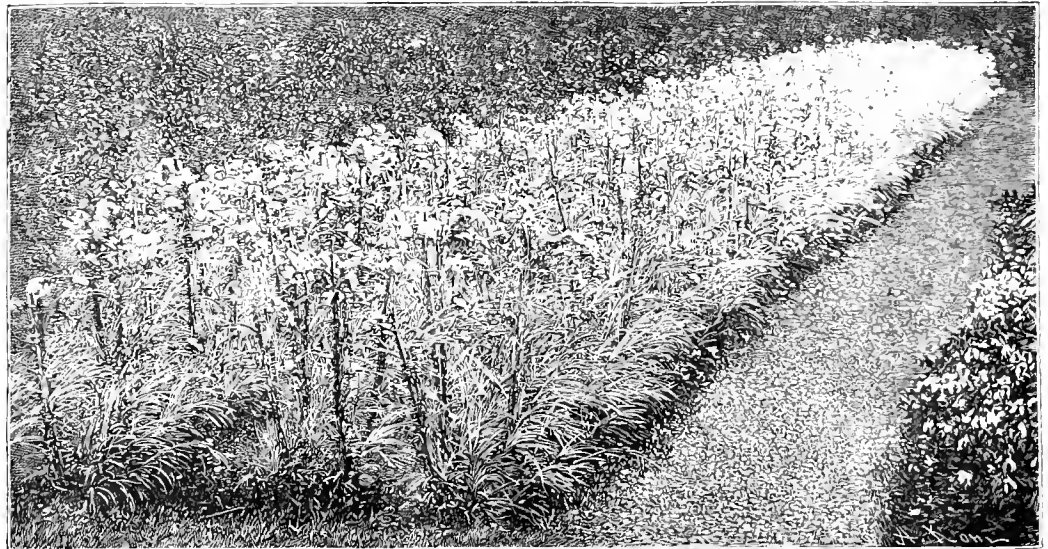
ber until about a fortnight ago. They certainly looked none the worse for having been kept dry. In some cases where the plants were kept in a moist condition they were entirely killed, and in others the excess of moisture upon the leaves has left very visible effects. It will be interesting to hear later in the season what effect this severe drying off will have upon the flowering.—G.

## SHORT NOTES.—ORCHIDS.

***Dendrobium Wardianum album.***—One of the finest forms of the pure white variety comes from Mr. Broome, of Llandudno. The flower is large and of good substance, with a yellow throat, the two small spots at the base being very faint, the remaining portion of the flower of the purest white. It is the best white form I have yet seen.—G.

***Lycaste Skinneri alba.***—Amongst pure white Orchids in flower at the Forest Hill Nurseries is a charming variety of this. The plant here referred to is of fine form and good substance, the flowers pure white, saving the lemon-yellow tinge on the throat. A small piece of *Cœlogyne cristata alba* was also very noticeable for the large number of flowers on it.—W.

***Dendrobium rhodostomum.***—I lately noticed



A bed of Carnations (Ketton Rose) at Bulwick, 1894.

a plant of this Veitchian hybrid in flower. It is a cross between *D. Huttoni* and *D. sanguinolentum*. The flowers measure fully 2 inches in diameter, the petals broader than the sepals, both white, tipped with purplish-crimson, the lip also marked like the other segments, but with a larger blotch and a maroon disc on the throat.—W.

***Cypripedium Ashburtoniæ expansum.***—This is one of the most beautiful *Cypripediums*, the dorsal sepal broad and very flat, of an apple-green colour and veined with brown, with an exceedingly broad margin of pure white. The whole surface is beautifully spotted with deep brown, the petals sparingly spotted with dark warts. A fine variety is now in flower with Mr. R. J. Measures at Camberwell.—G.

**A fine *Odontoglossum crispum.***—Will you kindly inform me the name of the *Odontoglossum crispum* I now send? I fancy the variety is unique. I have never seen a *crispum* with such pure and beautifully white sepals and petals. I bought the plant two years ago and it has now flowered for the first time.—W. MARSHALL.

\*\* The flower sent is a very refined form of *O. crispum*, viz., *O. e. virginale*. It is not unique by any means, but still not common and well worth taking care of. The flower lacks width in the petals and substance, but this latter may be due to its having been open a long time. It is, nevertheless, a chaste and beautiful form.—H. R.

## STOVE AND GREENHOUSE.

## CAMELLIAS CASTING THEIR BUDS.

THE early months of the year are very trying for Camellias, and it is during this period that many buds fall. There is more than one cause for bud-dropping, but it does not often occur with plants that have their roots in good condition. When the whole collection suffers in this way it is a sure sign that the treatment generally is wrong. I have seen a whole houseful of Camellias which were full of buds at the commencement of the winter and in robust health almost flowerless when they ought to have been full of bloom. This was caused by too high a temperature being maintained during the dull months. Camellias are very impatient of artificial heat, and, unlike Azaleas and some other hard-wooded things, cannot be forced into bloom. It is not safe to exceed a night temperature of 50° from November till March, and a rise of 5° in the daytime in sunless weather is quite enough. When bud-dropping is confined to certain plants it will generally be found that their roots are in a more or less inactive condition. This may be caused by over-

potting, unsuitable compost, or injudicious watering. Plants thus affected should be marked and examined when done blooming. In the case of medium-sized specimens this is an easy matter, as by turning them out of the pot the condition of the roots can be ascertained. If these are not numerous and black at the tips, as much of the old soil as possible should be worked away, replacing in a pot just large enough to contain the roots, and using a compost of fine peat with plenty of white sand in it. With careful watering fresh healthy roots will quickly be made and the plants will take a fresh lease of life. This simple operation will frequently suffice to restore lost vigour and prevent bud-dropping. Camellias do not need much pot room, and should never be repotted unless the soil is quite filled with roots. I have known plants to remain without change of soil for ten years and every season give a full crop of bloom. These root-bound specimens require, however, good attention in the matter of watering. Plants of this description often cast a portion or the whole of their buds through the soil not being quite moist enough when the buds are swelling. Enough water should be given when necessary to thoroughly soak the ball of earth. In the case of such root-bound specimens, unless some of the moisture escapes from the drainage hole, enough has not been given. It is a curious fact that

weakly Camellias are apt to form a quantity of buds. If these are all allowed to remain it will frequently happen that not a single one expands. Early in autumn such plants should be disbudded, leaving one bud only to a shoot. J. C.

**Bignonia venusta.**—This is a lovely creeper, and one that should be planted where shade in an intermediate house is required. The specimen at Syon House rarely fails to flower profusely, and is very beautiful for a roof when allowed to fall down in festoons, and there is no severe tying in of the growths. To show how well this plant will thrive in a low temperature, I may remark that the temperature of the house in which it grows has often been under 50, and at the roof much lower, the house being lofty. It grows freely, producing its funnel-shaped, long-lasting flowers in quantity. When grown in stoves, as often advised, it does not thrive so well, being very subject to thrips and red spider. Given, however, a warm greenhouse, it succeeds with little trouble and is a pleasing object. The plant at Syon House is probably the oldest in the country.—VISITOR.

**Pleroma macranthum at Kew.**—The value of this plant at Kew has frequently been noted in THE GARDEN. We have few plants which bloom at this season so freely and of a similar colour, the rich purple-blue flowers being very handsome, a succession being produced on the same shoot. This old plant was formerly known as *Lasiandra macrantha*, and was often recommended as a suitable subject to cover a wall or pillar in the stove, but I do not advise this treatment. At Kew it is blooming freely in the greenhouse, the flowers being more lasting and more freely produced in this way. There is less trouble, too, with insect pests. Grown as a bush it is very effective and far better than long straggling plants without any leaves at the base. To obtain flowering plants in 6-inch pots, cuttings, taken off now with a heel, struck in bottom heat in a sandy compost, three in a 3-inch pot, and potted on when rooted, using more loam at the last shift, if grown in cold frames during the summer will flower all through the winter in a temperature of 55°.—VISITOR.

**Zonal Pelargoniums for winter.**—I read with interest the notes on these and other soft-wooded plants for winter flowering by E. Burrell (p. 103). He names a few zonals which he finds most suitable for winter blooming. I give a few which I find suitable, viz., E. V. Raspail, Mme. Thibaut, Guillon Mangilli, Richard Dean, Imogene, Zelia, W. H. Williams, Mme. Leon Dolly, Lotus, and a semi-double variety which I do not know the name of. I cannot speak well of Queen of the Belgians as a winter bloomer. I prefer striking the cuttings in autumn in preference to the spring, as I find by so doing a better foundation is laid. I do not agree with E. Burrell when he says that the summer quarters for these plants should be pits from which Potatoes, &c., have been lifted, and that the Pelargoniums should be shaded in hot weather. I would not shade zonals were it not to preserve the blooms. After having been finally potted, my plants are stood out with the Chrysanthemums where they get the full sun three parts of the day. When the pots are full of roots the plants receive a little liquid manure about twice a week, all blooms being picked off till the plants are housed in the autumn. A good batch of *Primula obconica* is useful during the winter months associated with the other things mentioned at page 103. I prefer sowing a pinch of seed each spring with the Chinese *Primulas* to dividing the old plants.—R. NAILOR, *Roughy*.

**Thyracanthus rutilans.**—This is one of the good old-fashioned plants that have been in many cases ousted from their position in the garden by less meritorious subjects. In many places, however, they still find a home, and their beauty is much appreciated. At Burford Lodge many uncommon but desirable plants are well done, as may be seen at the meetings of the R.H.S., for Orchids are by no means the only subjects grown

by Sir Trevor Lawrence in his Surrey garden. From thence was sent to the meeting of the R.H.S. on February 12 a specimen of *Thyracanthus rutilans* which was greatly admired, and deservedly so, as the pendulous racemes of bright crimson tubular-shaped blossoms are very unlike those of any other occupant of our houses. From the way the flowers are produced it must be grown as a standard, for it is only in this manner that the drooping clusters of blossoms are seen at their best. Cuttings are easily struck in the spring, and should be grown on freely during the season. The same plants may be kept and flowered in a satisfactory manner for years. This *Thyracanthus* needs the temperature of a stove in the winter, but during the summer months artificial heat can be dispensed with. According to the "Dictionary of Gardening," the correct name of this plant is *T. Schemburgkianus*, introduced from Grenada in 1855 and known in gardens as *T. rutilans*, the true *T. rutilans* being a native of Colombia, from whence it was introduced in 1851. The genus *Thyracanthus* is one of the *Acanthads*, and it is singular how much the members of this order, despite their showy blossoms, are neglected in gardens. Perhaps this is to some extent owing to the fact that they are unfitted for use in a cut state, as they so quickly drop under such treatment.—H. P.

**Ceanothus under glass.**—It is now several years since I first saw some of the forms of *Ceanothus* brought on under glass and employed for the embellishment of the greenhouse, and though they are seldom used in this way, yet they supply a colour but little represented among plants in bloom either in the stove or greenhouse, while among forced shrubs they stand out by themselves. Some flowering examples of *Ceanothus dentatus* and *C. Veitchianus* are now in No. 4 greenhouse at Kew, and their bright blue blossoms, although not particularly numerous, are very distinct and pleasing. Certainly greater use might be made of them in this way, for their neat growth and deep green foliage render them, irrespective of blossoms, decidedly ornamental. If grown for flowering in pots, a neat, bushy habit of growth should be the object aimed at, and the plants should, of course, be grown in the full sunshine in order to induce the formation of flower buds. The best examples I have ever seen were some bushes of *C. Veitchianus*, that were kept altogether in pots, and plunged out of doors during the summer months. If lifted from the open ground in the autumn and needed for flowering in the following spring, the plants should be potted as soon as possible in order to encourage the formation of roots before winter sets in.—T.

#### WINTER-FLOWERING PLANTS FOR THE CONSERVATORY.

**ACACIA DRUMMONDI** flowering in 5½-inch pots is at the present time a pleasing object, the soft saffron tint of its Bottle-brush-shaped blooms when borne in quantity being very effective. The culture is simple, and by stopping at intervals good bushy specimens may be obtained in small pots. These plants will come into flower during January and February. *Pimelea spectabilis* is a very old introduction, but is now-a-days seldom seen. It bears umbels of white flowers about 2 inches in diameter at the end of the shoots, of which in dwarf well-grown specimens there should be from twenty to thirty. This *Pimelea*, with *P. Nieppergiana*, a pretty but rather smaller-flowered species, is now in bloom in the greenhouse, and constitutes a welcome change from the ordinary occupants of the shelves at the present season. *Chorezema Lowi* should be grown in every garden where a bright conservatory is needed at this time of the year. Small plants with their shoots smothered in flowers are easily obtainable, and the effect of the brilliant Pea-like blossoms is enhanced by the deep green of the prickly Holly-like leaves. The blooms last a long while in perfection, and well-flowered sprays are very valuable for indoor decoration. *Boronia*

*heterophylla* is a charming winter-flowering plant, its slender branches being studded with carmine blooms somewhat the shape of the individual bell of the Lily of the Valley, though lacking its spreading rim. But perhaps *B. megastigma*—on account of its delicate perfume called by some the violet-scented *Boronia*—is to be preferred, for though its flowers are inconspicuous, one plant is capable of filling a room or small conservatory with its delicious odour. All the foregoing subjects are easily grown and do best in a compost of peat and sand. *Cytisus racemosus* with its wealth of clear yellow flowers is now indispensable in the conservatory. Young plants are the most satisfactory both in length of raceme and quantity of bloom, and if well attended to during the earlier stages of growth shapely specimens can be produced with but little trouble. This *Cytisus* is not particular as to soil, loam, leaf-mould and sand suiting it well. In Devonshire it grows out of doors without protection all the year round, but it is never so valuable as in the conservatory during the first two months of the year.

S. W. F.

**Begonia semperflorens gigantea.**—We have now a great number of widely diverse forms of *Begonia semperflorens* in cultivation, but the bold-growing kinds to which the name of *gigantea* has been applied owe their origin to the intercrossing of that species with the Mexican *B. Lynchiana*, first distributed under the specific name of *Roezli*, and as such a coloured plate of it was given in THE GARDEN, August 25, 1883. M. Lemoine was, I believe, the first to cross these two *Begonias*—at all events, he was the first to put the progeny thereof into commerce. The plants are of a strong, bold habit of growth, more nearly partaking in this respect of the character of *B. Lynchiana* than of their other parent. The continuous blooming qualities of this strong-growing strain is a great point in favour of the members of it, as if needed they could, by growing on successional batches, be had in flower all the year round. It is, however, in autumn, winter, and early spring that the blossoms are most valuable, and at any time, but more especially during the dull season, a bold group of flowering examples forms a very ornamental feature in the greenhouse or conservatory. The flowers are borne in large, massive clusters, so that even though the plants are somewhat liable to run up without branching much, they must not be stopped too freely, otherwise the clusters will be much smaller and a good deal of the distinctive features lost.—H. P.

**Boronia heterophylla.**—This has deservedly become within the last few years one of the most popular hard-wooded plants that we have, and no wonder, for it is not difficult to grow, and its beautiful brightly coloured blossoms are borne in great profusion. The flowers are not so fragrant as those of *B. megastigma*; still they emit a very pleasing perfume, which must be enjoyed without disturbing the plant, as the leaves if agitated in any way have a heavy, disagreeable smell, which is by no means desirable. The blossoms of this remain fresh and bright for a long time if shaded from the hottest sun, and this is a great point in favour of this *Boronia*. The sober-tinted *B. megastigma* must on no account be passed over, as its little bell-shaped blossoms, delicately poised on slender stems, are so fragrant, that a single bloom can for this reason be detected for some little distance. Its scent, too, seems to be admired by nearly everyone, which is not always the case with flowers remarkable for their fragrance. While noticing the above-named species of *Boronia*, the merits of such as *B. serrulata* and *B. elatior* must not be overlooked. The two last flower somewhat later than the others mentioned.—T.

**Begonia manicata.**—Some three years ago when a *Begonia* conference was held at Chiswick several papers were read on the subject, among others one of especial interest by Mr. Watson, of Kew, in which he enumerated the best fifty species of *Begonia*, and as there are about 400 species known to botanists, it is evident that it was

necessary to reject many in compiling that list. *B. manicata* finds a place therein, and deservedly so, for it is just now one of the most ornamental species we have, its pink flowers being borne in great profusion. This *Begonia* is not seen at its best when grown as a small plant, that is in a pot 5 inches in diameter, but as a large specimen it is very effective. This is owing to the fact that the individual blossoms are but small, and though borne in considerable numbers on loose branching panicles, they do not make much of a display when only two or three flower-spikes are borne on a plant, but a large specimen bearing a great number of flowers forms a very ornamental object in the cool end of the stove or the intermediate house. The stems of this species are short and of a stout, succulent nature, while the smooth shining green leaves are decidedly ornamental. A singular appearance is presented by peculiar fleshy scale-like hairs of a brownish colour, which are freely borne on the undersides of the leaves and also on the leaf-stalks. There is a variegated form of this, *aureo-maculata*, in which the leaves bear large blotches of yellow, but it is not very constant, and even at its best I prefer the ordinary green type. *B. manicata* was introduced from Mexico in 1842.—H. P.

#### CYCLAMENS AT HORNHAM CLIFF.

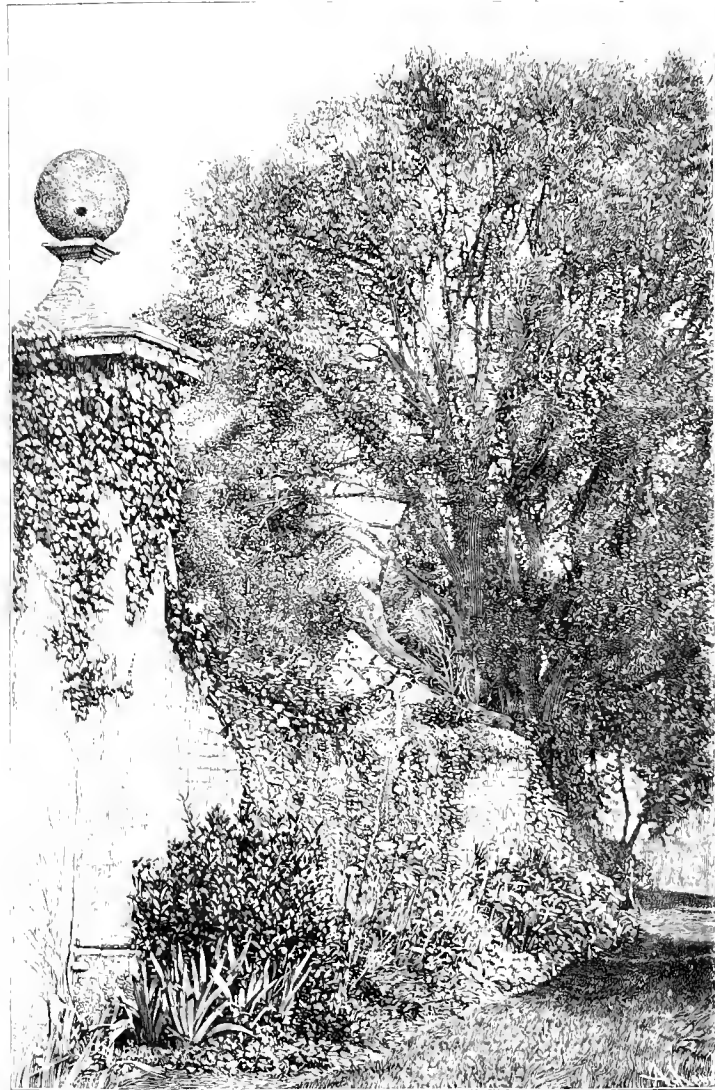
As usual at this season, there is a very fine display of Cyclamens at Hornham Cliff, Salisbury, the residence of Capt. H. Greenwood. About 250 plants are grown, and these, although not large, are models of careful and skilful culture. The foliage is bright, large and prettily marbled, in some cases almost hiding the pots, and the plants are literally covered with bloom. Hundreds of buds will apparently prolong the flowering season until far into April or May. The varieties are chiefly of the giganteum strain, the Giant Crimson and Giant White being remarkably good flowers. They are large, the former deep crimson-lake in colour, the latter of the purest white, the flowers very full, owing to the great width and substance of the petals which are well thrown back. Besides these and other self-coloured flowers there are many with a deeper colour at the base, one with flowers bright salmon-pink above and deep purple below, being very striking and a novel break. Vulcan is bright rich crimson, not so large as the giant strain, but very free and of a good habit. White Butterfly has the segments spreading when partly open, and is in this state charming, while when fully open they are recurved as in the other kinds. Mr. Robey prefers sowing the seed at the end of January rather than in late autumn, and though some may be inclined to dispute this point, the results attained abundantly testify to the wisdom of the course pursued. His reason is that the plants are more easily kept growing, and all who have had experience in Cyclamen growing know how important a point this is, how easily the plants are checked and the mischief that is thereby caused. The seed is sown in 6-inch pots in rich, light, loamy soil and placed in a propagating case. As soon as the young plants have made about three leaves they are placed in 3-inch pots and arranged in low frames as close to the glass as possible. They are encouraged to grow freely, a moist genial temperature being always kept up about them, and they are never allowed to get dry at the roots. The frames are carefully ventilated and shaded during the summer months and the plants placed in their flowering pots in August. These will vary in size from 5 inches to 8 inches according to the size of the plants. Mr. Robey is not in favour of the planting-out system, but prefers to keep the plants in pots all through the season. The compost used consists of a third good sound loam, an equal quantity of partly decayed leaf soil, a sixth part each of peat and dried cow manure, with a good sprinkling of clean, coarse silver sand. After potting, the plants are returned to the frame, kept rather closer for a time, and watered sparingly until the roots are again on the move. As soon as these touch the sides of the pots liquid

manure is supplied, well diluted at first, increasing the strength by degrees as the plants advance into flower. The plants are not kept after the second year, as the younger seedlings are found to be much more vigorous, quite as free-flowering, and in all ways more satisfactory. R.

#### FEBRUARY IN SOUTH DEVON.

DURING the month of February the temperature on the grass fell on every night of the twenty-eight below the freezing point, and on March 1 frost had been recorded for the thirty-five days immediately preceding. The greatest amount of

has amounted to but 0.01 of an inch during the month, being 2.73 inches below the average of the last sixteen years and 1.71 inches below the record for February, 1894. Curiously enough, the rainfall for February, 1891—the blizzard year—was exactly similar to this year's measurement, viz., 0.01 of an inch, though the sunshine experienced at that time of exceptional fair weather was far in excess of the average. The rain measured during the two past months amounts to 4.11 inches, as against 6.21 inches recorded during the two first months of last year. At every change of the moon a change in the weather was hoped for, but the moon brought nothing but disappointment. On the 24th an alteration seemed imminent.



Border in lower garden at Bulwick.

frost registered was 15° on the 12th. The mean temperature of the month gave 9° below the average of the last sixteen years. The wind blew from the north or east—and generally with considerable force—for twenty-three days, its total horizontal movement, as indicated by the anemometer, being 7,000 miles, the greatest hourly velocity being recorded on the 4th, when between the hours of 7 p.m. and 8 p.m. a rate of 29 miles per hour was reached.

The sun has shone during 83 hours 55 minutes (this being 1 hour 40 minutes above the average) against 89 hours in February, 1894. The sunniest day was the 28th, when 9 hours 40 minutes, or 91.6 per cent. of the possible sunshine for the day, was recorded. Rainfall, or rather snowfall,

The morning was sunny and warm, and the wind, for the first time for many weeks, came out of the west. The moon was to change that afternoon, and the weather-change so confidently predicted seemed well-nigh assured, when in the afternoon, in a rain-squall from the clouds that had banked up on the horizon, the wind flew into the north-west, and by nightfall had steadily worked its way round to the frozen north again, and by the next morning 8° of frost had been registered on the thermometer. Great havoc has been worked amongst tender shrubs and plants in the gardens, but of these losses it is well not to speak until the genial spring weather—which must arrive ere long—shall give us the opportunity of compiling a correct list of the killed and wounded, at what



time we hold our annual roll-call. Of flowers there have been practically none, with the exception of a few Snowdrops, Crocuses and Winter Aconites, which in sheltered corners found themselves standing a-shiver, with no possibility of retreat, in the bitter wind. S. W. F.

## SOCIETIES AND EXHIBITIONS.

### ROYAL BOTANIC.

MARCH 20.

The first show of the present year was held on Wednesday, but, owing to the backward state of the season, there was a falling off in the number and extent of the exhibits. Miscellaneous groups added greatly to the extent and interest of the display. In one of the chief classes, that for a collection of hardy herbaceous plants, Mr. T. S. Ware, the only exhibitor, was awarded first prize. He had a charming selection, the best among them being *Primula cashmeriana*, *P. rosea*, and *P. denticulata alba*, Dog's-tooth Violets, *Muscari botryoides* in blue and white, the Carpathian Snowflake, *Trillium grandiflorum*, *Sanguinaria canadensis*, and numbers of *Saxifraga Burseriana*, perfect tufts of pure white blossoms, making an admirable finish to the front of the group. Mr. R. Scott, gardener to Miss Foster, The Holme, Regent's Park, was first for a group of greenhouse Azaleas, the second prize lot coming from Mr. H. Eason, gardener to Mr. B. Noakes, Hope Cottage, Highgate. The only group of Cyclamens was from Mr. T. Petridge, Boston Park Nursery, Brentford, to which the first prize was awarded. The plants were profusely flowered. Mr. Douglas secured first prize for twelve pots of *Polyanthus Narcissus*, the same for twelve Hyacinths, and for twelve Tulips. He showed fine varieties in grand form. A selection of the best will be found in the report of the Crystal Palace show. The best group of *Amaryllises* came from Mr. H. Perkins, gardener to the Hon. F. W. D. Smith, Henley-on-Thames. There were some fine kinds, especially Charles Penny, deep rich crimson, and Countess of Arran, light red. Mr. J. Douglas was second. Crocuses grown and shown in wide shallow pots made a brilliant display. A magnificent lot that obtained the first prize came from Mr. R. Scott. White Queen, pure white; Margot, light feathered lilac-blue; *Purpureus grandiflorus*, deep self purple; Albion, and Sir Walter Scott were all very good. Mr. Douglas was second. For a group of Deutzias, Mr. Douglas was first with a fine even lot of plants most profuse in blossom. The only lot of Lily of the Valley came from Mr. Scott, and was awarded first prize.

Among the miscellaneous contributions the group from Messrs. B. S. Williams and Son was very conspicuous. Clivias were a strong feature, two new varieties, Firefly and Model, the former bright red and the latter a softer shade of the same colour, showing distinct advances upon older kinds. *Dendrobium nobile albiflorum*, *Cypripedium Williamsianum*, *C. Chamberlainianum*, *C. Boxalli atratum*, *C. Morgania*, *Miltonia Roezli* and its white form, *Vanda tricolor*, *V. suavis*, *Cymbidium eburneum*, and *Calanthe Sanderiana* were the best among many Orchids well shown. *Boronia megastigma* in quantity diffused its pleasant fragrance. A silver medal was awarded. Messrs. Williams also exhibited floral designs, baskets of red Anthurium with white Lilac, and pink Roses mingled with dark crimson Carnations being noteworthy. This exhibit also received a silver medal. Messrs. W. Paul and Son, of Waltham Cross, were awarded a silver medal for a good collection of Camellias in pots and cut blooms, also Rose Duke of York and other new kinds. A beautiful group of flowering and fine-foliaged plants was arranged by Messrs. J. Laing, Palms, Crotons, Caladiums, and Dracenas being intermixed with *Lycastes*, *Dendrobiums* and *Cattleyas*. Clivias, Begonias and other flowering plants added to the beauty and effectiveness of the exhibit. A silver medal was awarded. A small,

but very interesting group of new and rare plants came from Messrs. J. Veitch and Sons, Chelsea. *Cypripedium Brysa*, with green dorsal sepal, twisted rosy petals and a lip having rosy dots on a white ground, was a pretty hybrid; also *C. Aphrodite*, of which the general colour is whitish, with rosy-purple suffusions. *Phaio-Calanthe rosea*, described in THE GARDEN of March 16, p. 190, was also shown, and *Cymbidium eburneum Lowianum*, carrying a fine spike of flowers. *Streptocarpus gratus* is a new variety with a leaf about 15 inches in length and 4 inches in width, the plant having many branched trusses of rosy-purple flowers. *Amaryllises* in fine deep-coloured kinds, as Milton, bright red, Eurasian, crimson-red, were very good. Some handsome *Rhododendrons* of the javanicum section were, Apollo, bright red; Brilliant, crimson; Minerve, fawn yellow; and Optime, deep fawn, with rosy margins to its petals; the flowers individually and the trusses remarkable for their size. *Raphia vinifera*, a new Palm with leaves like those of the Kentias, the leaflets having small bristles along their edges, was another interesting plant in this group. Messrs. Peed and Sons, of Norwood, sent a large group of fine-foliaged and flowering plants, to which a bronze medal was awarded, and Mr. Jannoch, of the Lily Nurseries, Dersingham, Norfolk, exhibited Lily of the Valley, finely grown and arranged in his usual effective style. Daffodils and other spring flowers, including *Scillas*, *Chionodoxas*, *Freesias*, and *Anemone fulgens*, made up a bright group from Messrs. Barr and Sons, a bronze medal being awarded. Mr. Ware also received a bronze medal for a large group of the best Daffodils, trumpet and star-flowered kinds. Mr. J. R. Stevens, Hassoek's, showed a Strawberry named Stevens' Wonder, and a certificate of merit was granted it. A description of this Strawberry was given in THE GARDEN of March 16, p. 192.

A full prize list will be found in our advertisement columns.

### CRYSTAL PALACE SPRING SHOW.

MARCH 16.

The first show of the season was not a very extensive one, but if the exhibits were lacking in number, the quality of them left nothing to be desired. Probably Daffodils of the trumpet section have never been better shown than they were by Mr. Howe, and it is satisfactory to see that these are receiving more attention. The class for the trumpet-flowered kinds is apparently a new one, and the quality of the exhibits it brought out should induce the authorities to make it permanent. Bulbs were quite the leading feature. For thirty-six Hyacinths Mr. James Douglas, gardener to Mrs. Whitbourn, Great Gearies, Ilford, Essex, was first with a grand exhibit of well-finished spikes. *La Grandesse*, white; King of the Blues and Sultan, deep blue; Princess Mary of Cambridge and Electro, light blues; Garibaldi, rich red, one of the finest of this colour in cultivation, were remarkably fine. For thirty-six Tulips Mr. Douglas was again an easy first with an even exhibit of great excellence and embracing a wide range of colour. Among the kinds shown, Joost van Vondel, white, was very fine. For length of flower and purity of colour this is certainly the best white Tulip we have, but it is unfortunate that another Tulip of a different colour bears the same name. *Proserpine*, rosy crimson; *Fabiola*, rose flake, a fine kind giving variety to the predominating selfs, and *Ophir d'Or*, rich yellow, were all noteworthy. Mr. W. Howe, gardener to Mr. H. Tate, Park Hill, Streatham Common, was second. Mr. Douglas was again first with twenty-four *Polyanthus Narcissi*, showing a fine lot. Among them Mont Ceis, a compact variety which usually produces two and three spikes to a bulb, is certainly one of the best of this section, and has a deeper yellow cup than Grand Monarque. *Bazelman major* and *Adonia* were also fine, this latter the best of any of the yellow-flowered kinds. Mr. Howe was also second in this class. In the Daffodil section Mr. W. Howe

was first with a magnificent exhibit of twenty-four pots, and all so good that it is hardly possible to single any out for special mention, except *maximus*, which, usually a shy kind, was here shown as profuse as any other kind and of telling effect with its rich yellow colour. Sir Watkin, Horsfield, and Ard-Righ were also good. Mr. J. Gibson, gardener to Mr. E. H. Watts, Devonhurst, Chiswick, was second. In this exhibit a pot of Golden Spur calls for special mention. It is one of the best yellow Daffodils and was finely shown. For thirty-six Cyclamens, Mr. J. G. Mowbray, gardener to Major the Hon. H. C. Legge, Fulmer, Slough, was first with a splendid lot, remarkable for the fine size and profusion of the flowers, especially the whites. Mr. Douglas was again first for twelve *Amaryllises*, Mrs. Laing, red, with white throat; Mrs. Douglas, soft feathered red on a white ground; and Erato, deep red, being the best kinds. We notice, however, both in this and the second prize lot which came from Mr. Howe a great preponderance of spotty or splashed flowers that are poor and ineffective as compared with the noble selfs. For twelve *Cinerarias*, Mr. Douglas was first with dwarf large-flowered plants, but not quite at their best. Mr. J. Slater, gardener to Mrs. Nothard, York House, Lower Sydenham, was second. Nine trained specimens of *Mignonette* of medium size, but admirably grown, from Mr. W. Barrell, gardener to Mrs. Thornton, The Hoo, Sydenham Hill, were awarded first in the next class.

Messrs. J. Laing and Sons, of Forest Hill, were first for a group of stove and greenhouse flowering and fine-foliaged plants, but the rather absurd limitations as to space altogether prevented effective grouping. There were many good things in the group; among Orchids, *Culogyne cristata alba*, *Lycaste Skinneri alba*, *Cattleyas* and *Dendrobiums*, and of greenhouse plants, Heaths, Azaleas and Begonias. Mr. Mowbray put up an excellent group of Cyclamens, arranged with a few small Palms and Ferns, the plants dwarf and abundantly flowered. It was the only exhibit in the class, but fully merited the first prize awarded.

In the smaller classes Mr. J. Gibson was first for twelve Hyacinths, with fair spikes of medium size. The first prizes for twelve Tulips and twelve *Polyanthus Narcissi* were also secured by Mr. J. Gibson. For twelve Cyclamens, Mr. W. Slo-grove, Gatton, Reigate, was first, and Mr. F. Watts, gardener to Mr. O. J. Trinder, Mount Vernon, Caterham Valley, second. There was little competition for Lilies of the Valley, but Mr. Lane, gardener to Mr. E. H. Coles, Burnt Wood, Upper Caterham, was first with an admirable exhibit, the leafage abundant, the spikes long, with large flowers thrown well up above the leaves. Mr. J. Bateman was first with twelve Chinese *Primulas*, dwarf, free-flowering specimens, but chiefly white.

The miscellaneous exhibits from the trade considerably augmented the interest and extent of the show. Messrs. W. Paul and Son, of Waltham Cross, exhibited *Camellias* largely, both flowering plants and cut blooms, also a number of plants in pots of their new Monthly Rose Duke of York, which evidently is also a good Rose for forcing. Some new and unnamed Tea Roses were also shown, the plants in pots and having several blooms. One that looks promising was named *Sylphe*. It has a long, full flower of fine shape and delicate colour, pale flesh-pink, shading to white externally. Messrs. J. James and Son, of Farnham Royal, Slough, exhibited a group of *Cinerarias* in their usual excellent style, the plants characterised by compactness, great size of bloom and exceedingly rich colours, especially among the selfs. Mr. T. S. Ware, of Tottenham, brought a large and varied group of spring flowers. Many kinds of trumpet and star *Narcissi* in pots were shown, and *Saxifraga Burseriana* in quantity attracted much notice, the little silvery tufts being almost hidden with a profusion of pure white flowers. Solomon's Seal, a most useful thing for forcing; the Carpathian Snowflake, *Colchicums*, *Bulbocodium*, *Cyclamen coum*, *Arum sanctum*, and

A. Eggeri (to which a first-class certificate was granted), Dog-tooth Violets, and a large mass of *Primula denticulata alba*, also certificated, were most noticeable among the many good things. Messrs. Peed and Sons, of Norwood, contributed a large group of fine-foliaged and flowering plants, and from the same firm came wreaths, &c., of which the body consisted of a grey Lieben with the flowers arranged in one part only. This was a most interesting exhibit, a charming variation from the conventional methods of making such things. Miss Jackson, of Upper Norwood, showed a beautifully arranged basket of cut Daffodils and Snowdrops, also bouquets, &c. Messrs. Laing and Sons, of Forest Hill, sent a group of coloured-leaved plants, the variegated form of *Nicotiana glauca* being well shown. The variegation is very distinct, pleasing, and well defined. The entire leaf is of a grey-green colour with a white margin of varying width around its edge. *Saxifraga sarmentosa tricolor superba* is a long-winded name to give to a pretty form of an old garden favourite. *Bertolonia E. Pynaert* was also shown in good form and colour.

A complete list of awards appears in our advertisement columns.

#### THE NATIONAL DAHLIA SOCIETY.

THIS, one of the oldest of the special societies having its headquarters in London, held its annual meeting at the Horticultural Club, Hotel Windsor, on the 7th inst., there being a good attendance of the leading exhibitors of the Dahlia. Mr. E. Mawley, the chairman of the committee, presided. After the usual preliminaries the hon. secretary (Mr. T. W. Girdlestone) read the report of the committee, which set forth that the ideal Dahlia season is yet to seek; that of 1894 cannot be said to have been an easy one for cultivators. The plants were late in starting into growth and the sunless summer did not help the plants to get over their backwardness. Fortunately, however, the annual exhibition of the society at the Crystal Palace fell on the latest possible date and the display of Dahlias of all classes was a fine one. The feature of the exhibition was undoubtedly the magnificent display of Cactus Dahlias, whose beauty, development, and variety were quite unprecedented, and the effectiveness of the exhibits of the Cactus and single Dahlias was further greatly enhanced by the new arrangement adopted at the exhibition of breaking up the usual long lines of tables by occasional octagonal groups, composed of the collections staged in some of the principal classes. The details of the numbers of the show and fancy Dahlias staged will be gathered from Mr. Mawley's analysis. The society have to deplore the loss of one of the patronesses in Lady Henry Grosvenor, who took the keenest interest in the raising of seedling Cactus Dahlias.

The financial statement showed that there had been received as subscriptions £52 7s., as donations £25 14s., from the Crystal Palace Company £50, advertisements in schedule £13 14s. These amounts, with the balance in hand of £9 9s. 2d. from last year, showed a sum of £151 4s. 2d. on the receipts side. Under the head of expenditure the sum of £133 12s. had been paid as prizes, including a disputed amount of £6 10s. left over from 1893, cost of printing, £15 3s. 11d., small sums £1 19s., leaving the scanty balance of 8s. 6d. only in hand.

The secretary said that what is obviously needed is an accession of members, or, as the other alternative, a reduction in the prizes. He also stated that arrangements had been made with the Crystal Palace Company that the annual exhibition would take place on Friday and Saturday, September 6 and 7. The adoption of the report and balance-sheet was then carried. The Rev. Charles Fellowes was re-elected president, also the vice-presidents.

Some names were removed from the committee and some additions made. Mr. T. W. Girdlestone was unanimously re-elected hon. secretary and Mr. E. Mawley hon. treasurer. The list of

Cactus Dahlias given in the schedule of prizes was revised by the elimination of Baron Schroeder, Cannell's Favourite, Chancellor, Duke of Clarence, Josephine, Lady Skelmersdale, Lancelot, Marchioness of Bute, Panthea, Princess Christian, St. Catherine and Sir Roger, as not representing the advanced Cactus character, and the following newer varieties were added to the list, viz., Major Haskins, Harmony, Mrs. Barnes, Henry Depraesle, Irene Cannell, Mrs. H. Cannell, Mrs. F. Fell, Gloriosa and Earl of Pembroke. Some reductions in the prize money were made in a few of the classes with a view of economising expenditure. It was resolved that for the future no certificate of merit should be given to a Cactus Dahlia unless exhibited in such a manner as to show length of stem as some guide to the habit of growth. Some special prizes offered by Messrs. Dobbie and Co., Florists, Rothsay, for single Cactus Dahlias were accepted. The proceedings closed with cordial votes of thanks to the hon. treasurer and hon. secretary, and to the chairman for presiding.

#### NATIONAL CHRYSANTHEMUM SOCIETY.

ON Monday evening last the general committee of this society held a meeting at Anderson's Hotel, Fleet Street, Mr. T. W. Sanders being in the chair. The secretary read amongst other correspondence a letter from Sir Edwin Saunders, thanking the society for again electing him as president. A resolution was then carried to the following effect: "That in order to mark the high esteem in which Mr. R. Ballantine, the late chairman of the general committee, is held, a testimonial suitably engrossed on vellum be presented to him on some future occasion." The report of the schedule sub-committee concerning certain special prizes was then presented, and those from Mr. J. Wills, Mr. W. Wells, Messrs. B. S. Williams and Son, Messrs. Sutton and Sons, and Mr. W. J. Godfrey were accepted. A copy of the catalogue recently published by Mons. O. de Meulenaere was then presented by the secretary, who called attention to its merits as a valuable work of reference in Chrysanthemum literature. It was resolved that the compiler be awarded the society's silver medal in recognition of his work. It was announced that the roll of membership at the present time consisted of 79 Fellows, 508 ordinary members, 27 foreign members, and 114 affiliated societies, an announcement that was received with much interest. One third of the floral committee retiring necessitated an election. The following was the result: Messrs. C. E. Shea, W. H. Lees, J. Wright, D. B. Crane, J. W. Moorman, and E. S. Addison. The election of chairman of that body resulted in Mr. George Gordon being appointed.

The secretary then announced the dates fixed for the meetings of the general committee, viz.: August 26, September 30, October 28, November 18, December 9, 1895, and January 10, 1896. The floral committee will meet on September 3 and 25, October 8, 23, and 30, November 11, 20, and 27, and December 3 and 11.

A report from the Jubilee sub-committee was next presented, in which it was stated that in order to celebrate the fiftieth year of the society's existence a special four days' show should be held, and a new medal struck to commemorate the event. It is proposed to institute some special classes in the schedule, the chief of which are a class for twenty-four Japanese blooms, distinct, with £20 and a gold medal for the first prize, £15 and a silver-gilt medal second, £10 and a silver medal third, and £5 and a bronze medal for the fourth prize. A similar class with the same prizes was recommended for twenty-four incurved blooms. A class for twenty-four single-flowered varieties is proposed, and also prizes for a collection of cut Chrysanthemums, old varieties grown previous to or at the time of the formation of the society. A banquet and conference will also be held, and a liberal donation towards the funds of the society from the Royal Aquarium Society has been promised. The catalogue revision committee was elected, the members being Messrs Harman

Payne, A. Taylor, H. J. Jones, Lees, and Crane. After the election of several new members, the Barnet and District Chrysanthemum Society and the Colechester Rose, &c., Society were admitted in affiliation.

On the motion of Mr. J. W. Moorman, a hearty vote of thanks was accorded to the editor of the new year-book and to the contributors for their work in connection with the book. It was resolved that Mr. Dean in future receive the sum of £75 per annum for clerical assistance instead of £50, as heretofore.

#### NOTES OF THE WEEK.

**Colchicum montanum**, now flowering freely at Long Ditton, is one of the spring-blooming species, the flowers freely produced in perfect clusters, and varying in colour from pale blush to rose.

**Primula denticulata alba**.—This is a nice form of an old garden favourite, and a fine pan of it was staged at the Crystal Palace by Mr. Ware. Its leaves are of a lighter green than those of the type, but the flower-spike is equally stout, erect, and crowded with blossoms.

**Saintpaulia ionantha**.—An error has crept into your note on this in a recent number of THE GARDEN (p. 133). This was not shown at Ghent or anywhere else by M. Linden, of Brussels, who had nothing to do with the introduction of the plant, but by Mons. H. Wendland, director of the garden at Herrenhausen, Hanover.—ED. ANDRÉ.

**Tulipa violacea**.—This new species, now flowering at Long Ditton, will be welcomed for its earliness, as it is in advance of *T. biflora*, hitherto the earliest flowering species. Its name is not exactly expressive of its colour, which is a deep, but beautiful magenta-red, the flower long-petalled and handsome, borne on a stalk about 8 inches in length.

**Calypso borealis**.—This rare and pretty little hardy Orchid appeared in Mr. Ware's group of plants at the Palace show. It is a small plant, a native of American mountain bogs, with a tiny heart-shaped leaf. The flower, like a miniature *Cypripedium*, but with an open pouch, is poised on a slender arching stem about 4 inches in height and of a rosy-purple colour.

**Iris reticulata** is now to be had in several very fine forms, and, unlike some of the early Irises, it is so easily grown that it ought to be very popular. At the Crystal Palace, in addition to the type itself, a variety called *purpurea* was quite distinct, its flowers of a uniform deep dark purple colour. The variety known as *Krelagei* is also very fine, the colour being quite different from that of either of the preceding.

**The Carpathian Snowflake**.—This form of the spring Snowflake is quite true to the distinction that was claimed for it, viz., the production of two flowers on a stalk. At the Crystal Palace show Mr. Ware showed a pot of it containing many bulbs, and all but one or two of the flower scapes had two large perfect flowers. The stain of colour on the tips of the petals is much greener in the flowers of this form than in those of the type itself.

**Arum sanctum and A. Eggeri**.—These two Arums were both shown by Mr. Ware, of Tottenham, at the Crystal Palace on March 17. The former is now becoming better known since the plate of it was published in THE GARDEN of October 14, 1893. *A. Eggeri* may possibly be a variety of the preceding, but in the colour of its spathe it is quite distinct—a rich velvet crimson-purple, chequered with markings of a darker purple hue.

**Skimmia Foremani**.—I saw this shrub at a show a few years ago, and was much struck by its appearance and the number of berries it bore. I bought two plants, and have never yet succeeded in getting them to fruit, although they have

flowered well. I have been told that it is necessary to fertilise the blooms from the *Skimmia japonica*, while another grower says this is not needful. I shall be glad of advice from your readers as to how I may best ensure a crop of berries.—H. WORTHINGTON, *Feniton, Devon.*

**Crocus Imperati and C. biflorus.**—There are so many varieties of the early spring Crocuses in cultivation, forms of *C. aureus* and *C. vernus*, that people are apt to overlook the numbers of other lovely species, and among them the two here mentioned. Both of these are now lovely in the grass. *C. Imperati* is specially beautiful when nestling in grass, the flowers a clear pure shade of rosy lilac. *C. biflorus*, or the Cloth of Silver Crocus, is lovely, the delicate shades varying somewhat from white to the palest lavender.

**Arbutus Menziesi.**—This noble tree is very abundant here on Vancouver Island. I have found it growing from the edge of the salt water to the very top of the mountains (different from what a correspondent stated in a back number of THE GARDEN). I have always found it growing in a dry situation. It seems to prefer a gravel soil, often among rocks. I know one mountain that is nearly covered with it. All the plants are bushes that have sprung up from the roots of old trees that were destroyed by fire a number of years ago. I have a very fine specimen growing at the top end of my nursery on a dry gravel ridge. This tree is about 20 feet high. The grouse and wild pigeons eat the berries.—G. A. KNIGHT, *Mount Tolmie Nursery, Victoria, B.C.*

**Winter-flowering Begonias at Forest Hill.**—For greenhouse decoration these Begonias are very effective, and are equally useful for cutting. Amongst those especially noteworthy at the Forest Hill Nurseries at the present time are *B. Bruanti elegans*, *B. rosca floribunda*, and the pure white variety. These plants are suspended from the roof in baskets, the long graceful habit of the plants having a very pleasing effect. These Begonias should certainly find more favour, as they can be accommodated in any greenhouse where the temperature does not fall much lower than about 50°. They enjoy a nice light open compost, and when once established will continue to grow and flower profusely as long as the plants are kept in good health. Cuttings should be taken during the months of March and April. By cutting back the old plants nice bushy subjects for the following season can be had, and the cuttings will make nice sized specimens and commence blooming the following autumn.

**Begonia socotrana.**—The island of Socotra, which is the only native home of this species, lies in the Indian Ocean about 120 miles east of Cape Guardafui and to the south of Arabia. It is mountainous, rocky, and arid, and, as Sir J. Hooker observes, one of the least likely places in which a Begonia might be expected to occur. It was here, however, that Prof. Bayley Balfour discovered *B. socotrana*, one of the prettiest, most distinct, and useful additions made to the genus in recent years. It is a tuberous species, and the rounded umbrella-like leaves are borne on erect, hairy petioles 6 inches or more high. The flowers are produced on erect scapes a little taller than the leaves, and each one measures 1½ inches to 2 inches in diameter, and of a soft, pleasing shade of rose. The species requires stove treatment. Going to rest in spring, the plants should be shaken out of the old soil and repotted in August, using a compost of turfy loam and sand with a little leaf soil added. Overwatering in the early stages of growth is to be guarded against. From this species Messrs. Veitch have obtained several hybrids, of which John Heal is perhaps the best. Both it and the species itself have been illustrated by coloured plates in THE GARDEN (see numbers for March 18, 1882, and March 9, 1889).

**The Mourning Iris (Iris Susiana).**—I should be glad of some information as to the growth and cultivation of this Iris. I recollect seeing one root in a 6 inch or 8-inch pot in a florist's window at

Cannes in April. This bore three flowers and was admired by everyone. I have since got good roots from Holland every year, but can make nothing of them. One root did bloom once (one flower) in the open air, but it died away, and subsequent roots have neither flowered nor grown. Yet I hear that this Iris grows and flowers in the Dean of Westminster's garden behind the Houses of Parliament. My experience of growing it in pots has been equally disastrous. I have had roots each year carefully planted in pots, large and small, in autumn. These pots have been put into a cold frame. Some have been left there, some have been put into an airy greenhouse, others into different houses, but always with the same result. The leaves quickly spring up, look most luxuriant until 8 inches or 10 inches high, then, whatever the winter or the temperature, they begin to wither and rot just as they do in the open air. I have tried all kinds of soil in vain. As I grow Tuberoses successfully, I thought (from the similarity of the roots) I could easily grow this Iris, but I am mistaken. Other Irises grow well in my soil, but *I. Susiana* beats me. In fact, I never saw in any garden a specimen of it.—R. D.

**Polygala myrtifolia.**—This is one of the many plants which, although seen occasionally in long-established gardens, belongs rather to a past generation than the present. Like numerous other plants which represented in our greenhouses the marvellous floras of South Africa and Australia, it was grown in considerable quantity fifty years ago, but, like the great proportion of the plants from the same regions, went out of fashion twenty years ago. There are, however, signs that this plant, along with others of the same class, are regaining some of their old popularity. An encouraging sign at any rate is their appearance in the shape of neat dwarf specimens on the benches at the Drill Hall during the spring. This *Polygala* flowers during autumn as well as spring, and a large bush 15 feet high was for several weeks in flower in the temperate house at Kew. The leaves, all though in size and shape resembling those of the Myrtle, have not the same deep glossy green, being paler and glaucous. The flowers are so much like those of the papilionaceous legumes, that most people look upon this *Polygala* as one of the Leguminosae. It belongs, however, to quite a distinct natural order to which this genus gives its name. The petals are of a rich glowing rosy purple, the stamens, also rosy, being produced in a cluster clasped by the petals forming the keel. A cool greenhouse temperature is all that is needed for this plant, which when large enough can be planted in the conservatory border.

**Narcissus triandrus.**—This delicately beautiful *Narcissus*, to which the poetic name of Angels' Tears has been given, is valuable for pots during the early spring. On comparatively long stems the flowers, sometimes two or three on one scape, stand well up from the Rush-like foliage, while the reflexed and flanged perianth, poised like white wings on the pendent nectary, imparts a distinctness of form that renders it unlike that of any other Daffodil. *N. cyclamineus* is the nearest approach in form to *N. triandrus*, but its colour is yellow and the perianth shorter and not so graceful. I collected two years since some bulbs of *N. triandrus* in the west of Spain, where they grow in profusion on the hills in a shallow peaty soil, in which is incorporated a large proportion of granitic detritus. I have seen it stated that this *Narcissus* is a lover of marshy soil, but my observations point to a totally different conclusion. The range of *N. triandrus* was confined entirely to the hills, which in summer must have been baked by the sun. In the lower meadows *N. triandrus* gave place to varieties of *N. Ajax*, while marshy spots were entirely monopolised by *N. Corbularia*. Planted out, *N. triandrus* does not appear to be a success; indeed, the flowers are too fragile to be subjected to an English spring without protection. In a pan or pot, however, under greenhouse culture the plants come into bloom during February and are invariably much admired. One pot containing twelve bulbs produced this year twelve flower-spikes, most of them carrying two blooms

and one of them three. The flowers, although so fairy-like, last well in water.—S. W. F.

**Hardy Water Lilies in the house.**—*Nymphaea Marliacea Chromatella* was in bloom in the Water Lily house here on March 1, and a few days later the Water Lily tank was gay, several varieties of Marliac's Water Lilies being in flower. The plants went to rest as usual, but started growing much earlier than I have known them to do for some years. I generally re-pot the Water Lilies in February, but omitted doing so this spring in the hope of having them flower earlier in the season. I am very satisfied with the results and can see no diminution in the size of the flowers. I grow the plants in large earthenware pans made specially for the purpose and also in tubs, so as to be able to arrange them in the tank, which is from 3½ feet to 5½ feet in depth. The soil I use for potting is marly blue clay, loam and cow manure. I put 6 inches or so of the clay in the bottom of the pans and tubs, and the loam and cow manure mixed at the rate of two of loam to one of cow manure. I believe the use of the blue clay is the principal cause of the Water Lilies growing so vigorously as they do. When repotting the plants the strongest roots are found in the blue clay. There is a 4-inch flow and return hot-water pipe in the tank, but the heat is very seldom turned on. I understand some growers run off the water from their tanks in the winter with the object of resting the Water Lilies. Is it a good plan to do so? Here the object is to have the Water Lilies in flower as early in the season as possible; later on the lakes and ponds in the demesne furnish an ample supply.—J. RYAN, *The Castle Gardens, Castlewellan, Co. Down.*

**Effects of the frost in France.**—M. Ed. André writes to us under date of March 9: "The destruction occasioned by the severe weather in Paris and neighbourhood has been immense, but not so great as during the winter 1890-1891. Evergreen shrubs have suffered greatly, numbers having had their leaves destroyed, although the wood is often sound, with the exception of the young shoots. *Prunus Laurocerasus*, *Viburnum tinus*, *Phillyrea angustifolia* and *media*, *Ligustrum ovalifolium*, *L. sinense*, *Ibota*, *Aucuba japonica*, *Rhamnus alaternus*, and *Choisya ternata* have suffered greatly. *Mahonia aquifolium*, *Phillyrea Vilmoiriana*, and *Prunus caucasica* have stood better. The losses would have been far greater if the frost had begun earlier, when the wood was still unripe, but what caused the greatest harm was the duration of the frost, which continued without cessation for forty-five days. The daily thaw burnt up the leaves of vegetation exposed to the sun; whereas towards the north where there was no thaw plants suffered much less. This I proved as I covered up a certain number of Rhododendrons, and these are in very good condition, while those of the same kinds exposed to the sun and thaw, but uncovered, have been much injured. Independently of the losses occasioned by this exceptional temperature to gardens, one must take into consideration the heavy losses nurserymen and seedsmen will sustain by being unable, from the advanced period of the season, to make many more deliveries before the spring. In Touraine the gardens have suffered much less. The leaves are burnt up and the stems of the young Bamboos are frozen, but the old stems have stood. The ground was not so deeply frozen as in Paris, where it was hardened to the depth of 2 feet, a fact certified by M. Bequerel in the *Jardin des Plantes*. Under the snow and under the grass in the same garden the ground was not frozen to a depth of more than 10 centimetres to 15 centimetres.

**Notes from Almondsbury.**—Two or three really lovely days have made bulbs reappear. Hepaticas are out in places, Snowdrops also. It is painful to contemplate trained shrubs, and, following Mr. Smith's advice, I will only say that here with a zero frost *Carpenteria californica* seems quite safe, also *Olearia Haasti*, all the

Magnolias like *longifolia*, *Watsoni*, also the *Hypericums*, *Spiræas* of all kinds, Tree Pæonies, but nearly all variegated-leaved shrubs look very wretched. *Iris stylosa* seems to me to have suffered terribly. I have a large quantity of it at the foot of a warm wall, and the whole mass looks as if a match should be put to it. It is well known that to burn prairie grass just now will ensure double growth this summer. Has anyone dared to try it on other plants? The fire is so often applied to plants and bulbs in their native countries, that one would like to know if a similar application of fire would do good in England. I have a fine pod of seed on *Iris stylosa alba* crossed with *I. speciosa*; it is in a pot, and takes a long time to ripen. Ought I to cut it off and ripen it artificially? I may say I have ripened seed of this *Iris* in England after a very hot summer, and then I think in the open the seed took six months to ripen. In a pot in the greenhouse one ought to be able to hurry matters. Recently there have been buried in our churchyard two interesting old gardeners: one was gardener at Abbotsford to Sir Walter Scott—Brydon by name—the other, aged 85, helped to plant the earliest Tree Pæonies in Lord Clifden's garden at King's Weston about 1824. These Pæonies are enormous specimens at the present time, and when in bloom are a fine sight. The old man had been a great traveller, and was interesting to talk to. His prize cards were a fine collection. He had some interesting species of Roses which I hope to get named this year.—C. O. MILES.

**Dry versus wet leaves.**—A mistake is frequently made in using wet leaves for filling Cucumber and Melon pits. Such, although heating violently at first, invariably go cold in a very short time, decay speedily following. Dry, newly-harvested leaves are preferable for all purposes, especially when used for supplying bottom-heat for striking cuttings. There ought always to be sufficient heat beneath cuttings to enable them to dry once a day after starting. When wet leaves are used, and the heat suddenly declines, cuttings often remain wet throughout the day, particularly when sun is absent, with the result that wholesale damping and stem-rotting take place. For propagating, also for early Melons and Cucumbers, I prefer to rake up a sufficient quantity in spring of Oak and Beech, taking them straight to the pits or beds rather than using those which were collected in autumn and have lain in a mass in the open.—J. C.

## PUBLIC GARDENS.

**Epping Forest.**—The sum of £3600 has been set aside for the maintenance of the forest for the ensuing year.

**Kew Gardens.**—The First Commissioner of Works has received a communication from the Lord Steward stating that, in accordance with representations made that access to the meadow in front of Kew Palace would greatly improve the arrangements for admitting the public to Kew Gardens, he had recently taken Her Majesty's pleasure on that point, and had been honoured by the Queen's commands to cede to his department for the use of the public the greater part of the meadow referred to. This piece of ground is  $4\frac{1}{2}$  acres in extent, and will also, when thrown open, allow visitors a direct instead of a circuitous access to the finest part of the arboretum.

**A new recreation ground for Clekenwell.**—The Works Committee reported that they had considered the proposal to lay out as a public recreation ground the churchyard attached to St. James's, Pentonville. The opinion of counsel had been taken by the trustees as to the right of the vicar to prohibit the laying out of the ground as an open space, except upon conditions imposed by himself. Counsel's opinion is to the effect that the rights of the vicar are limited if the Consistory

Court will grant the necessary faculty. The Public Gardens Association had, through their secretary, signified their intention of laying out the churchyard as a public garden, at a cost of £500, on the understanding that the Vestry would maintain the ground. They (the committee) recommended that the solicitors to the Vestry be instructed to take the necessary steps to obtain the faculty from the Consistory Court for laying out the ground as an open space in accordance with the above terms.

**Epping Forest.**—The Epping Forest Committee of the Corporation have recently presented their annual report for the past year. It shows that 16 acres of Wanstead Flats have been drained and levelled for football and cricket, as a means of giving work to the unemployed. The forest had suffered much less than usual from fire, and the committee were of opinion that the thinning had in many places checked damage from that cause. Various new bye-laws had been made, making it an offence to throw lighted fuses or matches in the forest, preventing the sale or distribution of intoxicating liquors in the forest by so-called "clubs," preventing the molestation of commoners' cattle and bringing dogs into the forest unless under effective control. When the London, Walthamstow, and Epping Forest Railway was constructed the committee felt sure that it would make the forest more accessible to the people residing in the northern parts of the metropolis. The income of the forest last year was £6148, including £2600 from the Corporation, and the expenses £6610.

**Open spaces.**—At the monthly meeting of the Metropolitan Public Gardens Association, 83, Lancaster Gate, W., Mr. F. D. Mocatta, vice-chairman, presiding, a grant of £5 5s. from the Leathersellers' Company, and donations of £25, £15 14s., and £10 towards special schemes on hand were announced. Communications were read from the municipalities of Paris and Brussels giving detailed lists of their public open spaces. The opening of Lincoln's Inn Fields and Whitfield's Tabernaec burial ground by the London County Council was reported, the association having taken a prominent part in the efforts made for their acquisition and preservation. It was agreed to place seats in Imperial Institute Road at a cost not exceeding £35; to give seats for Strand-on-the-Green, the Chiswick District Council paying half the cost; to lend some gymnastic apparatus for evening classes at a school in Stepney, at a cost not exceeding £10; to communicate with the Newington Vestry respecting the vacant site in East Street, Walworth; to undertake to provide trees and seats for Petherton Road, N.; and to lay out the disused burial-ground of St. James's, Pentonville Road, as a public garden, if the Clerkenwell Vestry succeeded in securing it and agreed to maintain it as such. The secretary announced that the erection of gymnastic apparatus in the crypt of St. Peter's, Walworth, had been completed, and that the children's playground added to St. Nicholas Garden, Deptford, would soon be ready for the reception of the apparatus which the association recently granted. It was reported that the laying-out of All Hallows Churchyard, London Wall, and the planting of trees in Whitechapel Road, which had been delayed by the frost, would soon be completed. A letter was read from the Mercers' Company declining to allow Arbour Square, E., to be opened to the public. Amongst other matters which engaged the attention of the meeting were the proposed preservation of the site of Clapton Pond and Paddocks and the laying out of Bartholomew Square, E.C., a vacant site in Canning Town, E., the Friends' Graveyard in Long Lane, S.E., and St. Mary's Churchyard, Battersea, S.W.

**Mr. Martin Hope Sutton.**—To very few is it permitted, after an active and successful business career, and a life spent in works of usefulness, social, philanthropic, and religious, to enter the threshold of four score years. An honoured resi-

dent of Reading—Mr. M. H. Sutton—has lived to attain his 80th birthday, the 14th of March, and the pleasurable occasion was on Thursday last duly observed. Mr. Sutton received over 100 letters and telegrams, besides a great number of congratulatory visits from friends in Reading. Addresses were also presented, amongst others, by the Church of England Y.M.C.A., the Reading and District Gardeners' Mutual Improvement Association, and by the chiefs of departments of the Royal Seed Establishment, from which business he retired in 1888, after being head partner for more than fifty years.

**The weather in West Herts.**—The most noteworthy feature of the weather of the past week has been the gradual decline in temperature during the evening and night, and its rapid recovery in the morning after the lowest point had been reached. Several days were very warm for so early in the spring, the readings in shade on two of these reaching 56°, and on another day 58°. On the coldest night the exposed thermometer indicated 11° of frost. Since the beginning of the month the temperature of the ground at 2 feet deep has risen 8°, at 1 foot deep as much as 12°. At the depth of 1 foot the reading is now 44°, which is 4 warmer than the March average for the previous nine years, but 1° colder than at the same time last year. Three days of the week were very sunny, the record of bright sunshine on each occasion exceeding seven hours. *Chionodoxa Lucilia* came first into blossom in my garden on the 19th inst., which is only six days later than its average date of first flowering for the previous seven years, but thirty-three days later than last year.—E. M., *Berkhamsted*.

## OBITUARY.

**Mr. John J. Thomas**, one of the most eminent American pomologists, died at his home in Union Springs, New York, on February 22, aged eighty-five years. Among his works, "The American Fruit Culturist," which was first published fifty years ago, still remains probably the most useful work of its kind. It has been revised many times to keep pace with the advance of pomology in America, and the latest labours of Mr. Thomas were given to the preparation of a new edition, which is to be published in May. Nine volumes of miscellany, entitled "Rural Affairs," which are selections from the *Country Gentleman*, of which he was an associate editor, were prepared by him. Mr. Thomas was a man of great simplicity and sincerity of character, combining sturdy integrity with a rare refinement, gentleness and unflinching charity.

**Royal Horticultural Society.**—At the next meeting of the Royal Horticultural Society, which will be held in the Drill Hall, James Street, Victoria Street, Westminster, on Tuesday, March 26, Mr. T. H. Crisp will, at 3 p.m., read a paper on "Lifting Large Trees and Shrubs." The vacancy caused on the fruit committee by the lamented death of Mr. Geo. Taber has been filled by Mr. Iggulden's appointment by the council. The vegetable show has now been definitely fixed for September 10 instead of October 15, and will be held at Chiswick Gardens instead of in the Drill Hall, as stated in the society's "arrangements" for the year. The show at the Drill Hall, therefore, on October 15 will be an ordinary fortnightly meeting.

**Names of plants.**—J. W. — Specimen too shrivelled to identify.—*Arthur Dadsell*.—Purple Crown variegated single Tulip.

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"This is an Art  
Which does mend Nature; change it rather; but  
THE ART ITSELF IS NATURE."—*Shakespeare*.

## FLOWER GARDEN.

### THE JAPANESE ANEMONE AND ITS VARIETIES.

THE Japanese Anemone and its two varieties with white and pink flowers are so well known and universally appreciated, that it would be superfluous at the present day to describe and extol them. But as these three original forms of the plant, hitherto so fixed and invariable, have commenced to exhibit some modifications, in that of late years three or four varieties differing from the older types have made their appearance, it seemed desirable to me in describing these new-comers to refer to the origin of their progenitors.

Anemone japonica (Sieb. and Zucc.), discovered in Japan by Thunberg, who took it for an Atragene, was re-discovered by Siebold, who saw it growing in the wild state on the high mountains of the central island, in moist woods, and on the banks of streams. It was at last introduced into Europe in the year 1845 by Fortune, who met with it in China (near Shanghai), and sent plants of it to the Royal Horticultural Society, London. It flowered for the first time in the grounds of this society in 1845, and in the following year Louis van Houtte published a coloured plate of it in the "Flore des Serres et de Jardins de l'Europe." Now everybody knows this perennial plant with downy foliage, branching stems, pinnatisect leaves unequally lobed and with rather narrow segments, and long stalked flowers generally composed of two rows of irregular, narrow, hooded petals of a more or less dark carmine-pink colour.

The origin of Anemone japonica elegans is not so clearly established. According to Decaisne, who made a distinct species of it under the name of *A. elegans*, Dene. (*Revue Horticole*, 1852, p. 41), it has in Japan the same habitat as *A. japonica*. It may be admitted that it was introduced into Europe shortly after *A. japonica*, since before 1850 it was mentioned in nurserymen's catalogues under the name of *A. japonica hybrida*. Ornamentally superior to the type, it is distinguished from it by its more ample foliage, its broader leaflets, its stouter, taller, and more numerous stems, and, lastly, by the form and colour of its flowers. These are of larger size and have from five to nine broad, rounded petals of a handsome, perfectly uniform light pinkish-lilac colour, and cottony on the under surface. These differences, although very important from a horticultural point of view, do not appear to be sufficient to warrant the formation of a distinct species, and notwithstanding the authority of Decaisne, we shall regard Anemone elegans as simply a variety of *A. japonica*.

From the facility with which it can be grown and propagated, this fine plant very soon became widely cultivated, and, amongst others, M. Jobert, a banker at Verdun (Meuse), was supplied with it from the establishment of Messrs. Thibaut and Keteleer, which was then located at Paris. In M. Jobert's garden one of these plants of *A. japonica elegans* happened to "sport," a shoot of it producing perfectly white flowers. When this variety was fixed, four

nurserymen received each a plant of it at the same time, and one of these nurserymen, M. Victor Lemoine, of Nancy, was the first to send it out in the early part of the year 1863. Such was the origin of Anemone japonica alba, which is also known as *A. japonica Honorine Jobert*, and which, with the exception of its white flowers, is identical in every respect with *A. japonica elegans*. It has now spread all over the world and is multiplied in millions, having almost entirely superseded the two other forms which were in cultivation before it appeared.

Twenty-five years passed away before any of the three original Japanese Anemones produced the slightest variation from the existing forms. This was owing to the circumstance that, as M. Van Houtte mentioned in 1846, "the seeds of this plant rarely become fully developed and fertile, even in its native country," and experience has shown that in Europe this never occurs at all. We have never heard of a single plant of these Anemones that was raised from seed, and it is amongst seedling plants that varieties are chiefly to be found.

To an accidental crossing, however, the origin of a new American variety which was sent out under the name of *A. japonica Whirlwind* by Messrs. James Vick and Sons, of Rochester, N.Y., U.S.A., was at first attributed. This plant is identical in foliage with the typical Anemone japonica and grows nearly as tall. It forms low, compact tufts of foliage and numerous firm flower-stems terminating in semi-double, cream-coloured flowers with greenish shades on the back of the petals. The general appearance of the plant differs essentially from that of *A. Honorine Jobert*, which is of taller growth and more graceful habit, bears its flowers at various heights on the plant, and has more slender peduncles. The American variety, on the other hand, bears all of its rather stiff-looking inflorescence at the same level. In their catalogue for the year 1887 Messrs. Vick described this variety as "a new double white Anemone, the result of a cross effected by some bee carrying the pollen between the single white Anemone and the semi-double pink variety." To anyone who is aware of the negative character of the Japanese Anemones in the matter of self-fertilisation and hybridisation, and of the difficulty of obtaining, in a climate more rigorous than ours, any naturally-ripened seed, the explanation of Messrs. Vick appears rather conjectural, and it is, moreover, so vague that it does not state which plant was the seed parent. Until we are better informed on the subject we shall regard *A. japonica Whirlwind* as a fresh sport, produced either by *A. japonica alba* or, as we think is more probable, by a plant of the typical Anemone japonica. Another reason which prevents us from regarding this variety as a seedling one is that in our grounds it has shown itself to be absolutely sterile, notwithstanding all our attempts to fertilise it artificially; whereas plants which are produced by hybridisation are generally very fertile.

When a plant which for the space of nearly fifty years has shown itself to be sterile and absolutely refractory against every attempt to fertilise it, at length, by the merest chance, produces two or three fertile seeds, there occurs a break in the history of the plant, which, however insignificant it may appear, is really of the highest importance, since it may prove to be the originating cause of extensive modifications. Such an event took place a few years since in Ireland and is recorded in THE GARDEN for 1892 by Mr. A. Campbell, gardener to Lady Ardilaun, Cong, Co. Galway. Mr. Campbell says: "Having had numerous inquiries about my new

Anemone, I beg to state that six years ago I observed a head of seed on a plant of *A. japonica alba*. This had an enlargement upon one side like a wart. This I sowed when ripe and got three seedlings from it. One of these I found much finer than the other two. From this plant the stock has been raised." This new variety was named *A. japonica Lady Ardilaun* and soon came into general cultivation on the Continent. It is distinguished from *A. japonica Honorine Jobert* by its taller growth (about 5 feet high), its thicker stems and peduncles, the width of its large, coriaceous leaves which are of a brilliant green colour—and especially by the greater size of its flowers, the petals of which are broad, firm and of a pure white colour. It is a noticeable circumstance that the whiteness of the flowers, which in the first case was the result of a sport, was here a characteristic of a seedling variety also.

A distinguishing feature of the Lady Ardilaun Anemone is that of producing seed, which ripens readily in the open air in a climate more favourable than ours. By artificially fertilising this plant we have obtained a series of seedlings which are commencing to show the greatest diversity of variation in habit, size of flower, doubleness and also in colouring. One of the first of these seedlings, which we sent out in March, 1894, is named Anemone japonica alba semi duplex, and was offered for sale at the same time as the American Anemone Whirlwind, from which it is distinguished by its different habit, more ample and livelier-coloured foliage and flowers containing from ten to twenty broad, round, pure white petals.

Another variety which we intend to advertise in the spring of the present year (1895) was exhibited by us to the Horticultural Society of Nancy last November under the name of *A. japonica Coupe d'Argent*. The leaves of this are large, like those of *A. Lady Ardilaun*, and also firm (nearly coriaceous) and of a quite lustrous and brilliant green colour. The stems, which are of the thickness of a lead pencil, are very perpendicular in growth, each bearing numerous flowers which stand perfectly erect on firm foot-stalks. The flowers, which are individually about  $3\frac{1}{4}$  inches in diameter, are formed of three or four rows of more or less undulated and hooded petals looking like little cups. From thirty-five to sixty of these small petals have been counted in a single flower. The colour of the flowers is creamy-white passing into pure white. Flowers which open after October 15 have a slight pinkish tint. The plant is, on the whole, of large dimensions; its perfectly erect habit of growth is quite distinct from that of *A. Honorine Jobert*, and its flowering-stems grow to twice the height of those of the variety Whirlwind.

Other seedlings which we have now under observation lead us to expect that the day is not very far off when the gardening world will become all the richer in possessing double-flowered Japanese Anemones in great variety of colour. EMILE LEMOINE.

Nancy.

**Cordyline australis purpurea.**—This is a very distinct form of the popular Cordyline australis, which is perhaps better known by the generic name of *Dracena*. When plants of the normal type are raised in quantity from seed there is frequently a considerable amount of variation to be found among them, the plants differing from each other in the width and number of the leaves, in their texture, and other particulars, but, generally speaking, not in the colour of the foliage. The above named variety, however, has the leaves of a uniform bronzy brown tint, much after the manner of that form of the New Zealand Flax

(*Phormium tenax*) to which the varietal name of *atro-purpurea* has been applied. This bronzy tinted *Cordylina* is well worth growing for the sake of variety, but at the same time it is not so attractive as the type, and far less showy than the variegated forms, which are very effective when associated with other plants. The ordinary form of *Cordylina australis* is increased in considerable numbers by seeds which are readily obtainable. Such a mode of propagation is not available for varieties like this, as the plants have not attained flowering size, but even if they were to produce seeds it is not at all probable that the prominent characteristics of the individual would be transmitted to the progeny.—H. P.

#### NOTES ON HARDY PLANTS.

**Bog plants.**—In reply to the interesting letter of Mr. F. W. Harmer (pp. 109-10), I am not yet in any better position than a few years ago with regard to the smoke from great ironworks on the one hand and the smoke of Leeds on the other. Still, I do not think that my position for gardening is absolutely bad. During the last twenty years I have come to believe that with care one may succeed where the surroundings are not absolutely or directly injurious to the plants. If Mr. Harmer will kindly excuse me for saying so, I feel certain that were I to change to where he would put me—nearer the river—I should be very much worse off, even with bog plants, and hundreds of other things would then be impossible. The water of the Aire is yet, and likely for some time to be, almost like ink, and a dense fog frequently hangs over the river. Even at my short distance I can rejoice in immunity from these fogs. Moreover, I take it, that to be on slightly rising ground on deep sandstone, with further rising ground in the rear, is not bad for a garden from the moisture point of view.

**Tropæolum speciosum.**—I scarcely wished to convey the idea to anyone that this plant disliked wet, though I should never think of growing it as a bog plant. I rather sought to convey the idea that whilst a naturally deep-rooting species is being established, it should be protected from wet and cold to help it until it took its place naturally in deep soil.

**Primula Sieboldi.**—I quite agree with Mr. Harmer's remarks, and I was struck by the statement of "A. D." that this did not like moisture. My experience is that, without giving it in the open air both a moist situation and a soil retentive of moisture as a safeguard against a dry spring or summer, none of the *Primula crotosoides* group ever do any good. I like to use it especially as an edging plant for a flat border where a main walk catches a number of other small walks at right angles from sloping ground. Such walks act as feeders during summer showers to the cross-walk, and give in a degree a sort of semi-bog condition, and just the place for such gay, but humble flowers as this *Primula* in all its varieties, *Calthas*, *Galax*, *Gentians*, and moisture-loving bulbs.

**Sunflowers.**—The noble picture so finely presented to us on p. 109, and the wonderful account by Miss Willmott, who photographed the specimen portrayed, are almost enough to make us discontented with our climate, but though we have to be content with far less gorgeous results, we may now and then gather a hint from what in such cases as the present can only be described as phenomenal results. We see by Miss Willmott's note that the results were far better in the case of the self-sown plants, and though the species specially referred to by Miss Willmott is but one of the annual varieties, it doubtless points to the desirability of dealing with hardy plants in the autumn as regards either seed-raising or the planting of roots of the perennial species, and I think were the root habit of the species studied it would be seen that, at least in the case of annuals, the capabilities of the plants could hardly have full scope when raised in spring of the year intended for flowering. Of course, as regards the peren-

nial plants generally dealt with in the form of roots, a spring transplantation might not be so well as an autumnal one, but the plant would grow out of its drawback by the following year. As a matter of fact I have found the transplanting of the perennial species give better results when done immediately after the foliage began to turn brown in late summer. Usually we find that the late-flowering composites are as well left for spring planting as in the case of *Michaelmas Daisies*, but I think somehow it is different with the *Sunflowers*; and what I should consider to further confirm this, anyone may prove for himself, the great amount of root-acton that takes place in late summer after root-division and replanting. This surely means something in the way of extra vigour for the following year.

**Rosa Leschenaultiana.**—I believe this is as difficult to procure as it is beautiful. I have long been seeking both at home and abroad for a couple of specimens or even material in the form of cuttings, in the hope of trying its capabilities both here and in a noted south of England garden. I cannot but think that others would be interested to know where this elegant *Rose* of the *sempervirens* group could be had. Evidently it is not in commerce, and, from what I hear of it, it is a *Rose* beyond all praise.

**Gentiana alpina.**—I find this name is being much more employed than formerly, which I fear many will find inconvenient, not that it is not a well authorised one, but because there are perhaps too many authorities for it—five, I think. From a gardener's point of view the name is a poor one for a *Gentian*, as nearly all the species are alpine, and the gardener is not to be reasonably expected to always inquire into the meaning of one name as applied to various plants. This is, of course, the real difficulty of several authors giving one name for different plants. According to Grisebach's treatise of the *gentianaecous* species, *alpina* is referable to three species, viz. *gelida* (M. B.), *aeaulis* (L.), and *verna* (L.). *G. alpina verna* (Tournef.) is synonymous with *verna* (L.), *G. alpina latifolia* (Bauh.) is synonymous with *aeaulis* (L.), and *alpina* (Vill.) is referred to the same, but as a sub-variety, i.e., through *angustifolia* (Vill.). *G. alpina* (Adams) is synonymous with *gelida* (M. B. or Hook.) and also with *armena* (Tournef.). This (*gelida*) is perhaps the rarest of all *Gentians*, as it is not known where a single specimen, dead or alive, exists excepting in our national herbarium. I can scarcely believe that all this nomenclature will seem perfectly clear without a little further examination, but I give these facts as an instance of plant nomenclature, not so much for their intelligibility at a first glance as to show how error may easily occur when different authorities employ one plant name, but which by the respective authors may refer to different plants. It may be useful also as showing that in some cases of old and large genera we should by some means, as that of giving the author for the plant intended, seek to make our intentions clear.

**Aciphylla squarrosa.**—This beautiful umbellifer, known in its native country (New Zealand) as Bayonet Grass or Bayonet Plant, is, I believe, widely doubted as a hardy plant. I am not so sure that it is wanting in hardiness, neither the kind known as *A. Colensoi*, be it a species or a variety of the present. However, my specimen seems to be in perfect order, having endured 31° of frost. Of course there is a deal to be said for environment. I do not think that in the lower part of the garden, where there is a little more shade and wet and a soil somewhat colder, quite as satisfactory results would have come about; indeed I have noted carefully that unless the plants are grown in the fullest exposure and with their collars dry, they are liable to make a growth too succulent and tender, and all the worse because they continue to make late growth. I have noticed that the peculiar forked grass-like foliage, or hard ribbed leaves with their steel-like points, are extremely susceptible to anything near them obstructing the light. Young plants against a wall become drawn badly in a day or

two, throwing themselves out of their rounded symmetrical form into the oblique. This to my mind indicates such influence of direct light, that I think it reasonable that the requirements of the plant for the openest exposure amount to an essential in its culture. I do not know what other people's experience may have been with this curious genus as regards transplanting, but I have never yet succeeded with a plant in the open ground that had been transplanted after the age of two or three years at most, and when I speak of age I mean the age of a plant from seed, which is by far the best means of propagation. By-the-by, seed of late has been somewhat scarce. I suppose it is generally known that some plants are wholly male and others wholly female. What a grand effect is to be produced by a mixed group of the *Aciphyllas* as I saw them many years ago at the Edinburgh Royal Gardens, and it was at that time I observed the marked difference in the sexes.

**Epigæa repens.**—Corresponding with my friend Mr. Gerard, of New York, he employs a few sentences of such practical worth in reference to establishing this plant, and having special reference to what I said a little time ago about seedlings, that I think they cannot fail to be of general interest. He says, "I notice your note on *Epigæa*. That is a case in point as to growing our native plants. It would scarcely pay any tradesman to grow them (the seedlings) on, though it is the only practical way to furnish plants likely to live. You can go into the woods and pick up big plants much faster than you can find seedlings, and the ordinary receiver of large plants would think he was getting treasures, though none of them lived. The plant grows easily enough if properly established, and I have seen it on rocks by the wayside in full sun." J. Wood.

Woodville, Kirkstall.

**Sweet Peas.**—"Selwood" in his article on Sweet Peas (p. 130) says "Curiously enough, the growth first formed by Peas raised in pots rarely reaches a flowering height; it is the growths that spring up from the base that do such good service." Now this does not at all agree with my experience in growing Sweet Peas. I always sow the seed in pots and plant out from those 5½ inches in diameter, giving the plants one shift from the smaller pots they are sown in. Last year the first-formed shoots grew 8 feet high; in some instances the side growths from these measured 5 feet. The main point about Sweet Pea growth is to sow thinly and keep the plants growing freely by liberal water supplies during dry weather and freedom from seed pods.—E. M.

**Marie Louise Violets.**—I send you a sample of *Violets* grown here, and would value your opinion on them. One flower measured at hazard I found 1½ inches across. The *Violets* are all grown from crowns, and all runners are cut off as soon as seen. The young plants are put out in the full sun and have it on them all day long, and in dry weather they are well watered. At the beginning of September they are moved into a frame. The frame has brick sides raised 2 feet in front, 3 feet behind, and is filled in with flints and rubbish to within a foot of the glass. The bed is composed of nothing but leaf-mould, which is collected from under the Beech trees and screened. The plants are put in so that they touch the glass, and shut up at sunset. Free ventilation is given when there is no frost, but as soon as the days get short and cold the lights are put on before sunset so as to get a little warmth. During frost the frame is covered, and kept covered till it has gone, but opened to get flowers as good as those during sunshine. The soil here is light, and of course being on the Plain is very chalky. The wild *Violet* grows in the fields here, and covers the banks with purple, giving out a strong sweet scent, so no wonder cultivated *Violets* do well with care. As I write, my frame, 24 feet by 6 feet, is one mass of flower.—ARTHUR NEWALL, *Wilsford House, Salisbury.*

\* \* \* The finest flowers of this handsome *Violet* we have seen.—ED.

## CHRYSANTHEMUMS.

JAPANESE CHRYSANTHEMUM  
DUCHESS OF YORK.

DUCHESS OF YORK must be regarded as the first Scotch seedling Chrysanthemum ever raised. It is a matter of general observation amongst lovers of this popular flower that wherever it is grown with any degree of success for exhibition, it follows as an inevitable result that the growers sooner or later gravitate towards the more interesting phase of culture, viz., seedling-raising. And so it has been with our

of merit. It has also been awarded a silver medal at Edinburgh and a silver medal and a certificate at Glasgow. In this respect the Scotch variety seems to rival even the equally celebrated American novelty Philadelphia, which came out the same season.

The reputation of Duchess of York may therefore be considered as established, especially when it is added that it is now figured for the fifth time in horticultural literature. Mr. H. J. Jones, of the Ryecroft Nursery, Lewisham, was not slow to recognise its value as an exhibition flower, and the stock, therefore, passed into his hands for distribution. Little can of course be said as yet about its cultivation in the south, for I believe all the blooms that gained awards



*Chrysanthemum Duchess of York. From a photograph sent by Mr. H. J. Jones, Lewisham.*

Scotch friends. Mr. Laird has shown in his article, "The Edinburgh Chrysanthemum Shows," which appears in the recently-published Chrysanthemum year-book, what a firm footing the flower has obtained in Scotland. The difficulties of ripening seed even so far north as Edinburgh must be great, and perhaps from a pecuniary point of view almost impossible, but Mr. J. Carruthers, of Corstorphine, has obtained seed from a friend resident in Japan which, having been sown, has resulted in the production of a new variety which will undoubtedly make a mark in the world. Blooms of this variety were staged in splendid condition at the floral meeting of the N.C.S. as early as October 10 last year, when it was awarded a first-class certificate. It was also exhibited at a floral meeting of the R.H.S. on November 27 and there received an award

were grown by the raiser. My own notes of the variety when it was first shown only apply to the blooms, and I therefore extract from Mr. Jones' catalogue the following details, which are more complete: "The colour of the bloom is soft light yellow; it is of extra size, most massive and graceful in form; the florets, which are long and prettily cut, droop and build up a flower of a true Japanese character. The plant grows about 5 feet high without topping, and the handsome foliage is retained to the last. Good from any buds, but those secured near August 20 will produce the more perfect specimens. Use 10-inch pots and adopt high feeding."

The illustration accompanying these notes gives a very faithful idea of the flower as exhibited and has been much reduced from the original photograph. There is no doubt but that next season's cultivation will place this

first Scotch seedling very high in the list of popular show Chrysanthemums.

C. HARMAN-PAYNE.

## CHRYSANTHEMUM W. H. LINCOLN.

I WILL try and satisfy "S. W. F." as to my reasons for using the words "outraged Nature" in my note (p. 128), as the term he substitutes does not meet the case. The outrage, or action, I had in view was the lifting of a plant from the open ground in October, and the consequent mutilation of roots combined with the subsequent altered conditions in which such plants generally have to exist for a time, viz., under shade and in a closer atmosphere than that to which they have been accustomed. Such treatment is certain to give a severe check at a time when the resources of the plant are being severely taxed by the formation or swelling of the buds, and the deprivation of light is both unnatural and a hindrance to the proper development of the flowers. Most growers recognise the fact that the period directly subsequent to the bringing of the plants under glass is a critical time, even with plants which have been grown in pots throughout the season and which need not be kept in a close atmosphere or shaded. We need go no further than to "S. W. F.'s" plant to see the effect of these altered conditions, for some of the buds on it refused to swell, and others produced small and badly shaped blooms. If Nature did not intend these buds to develop, will "S. W. F." kindly tell us the reason? If she did, then she was in some way outraged. We know that plants are grown in this way in large numbers every year, and that they produce fairly good blooms which are probably saleable, but such blooms will not compare well with those grown under other and, as I think, better conditions. I am no admirer of huge-flowered Chrysanthemums, but I must say that blooms of the variety in question which only average 3½ in. in diameter are undeveloped, and would scarcely show their true character. I still think that "S. W. F.'s" example bears out in a measure my remark that only one flower should be allowed to remain on each shoot. I must own that I am not yet convinced that blooms sold at 1s. per dozen, even without the pots, can be remunerative, though they may occasionally be sold at that or even at a lower price. Flowers and fruit, too, have sometimes, unfortunately for the grower, to be sold for less than the cost of growing. But when one is told that such blooms and at such a price would prove "a veritable gold mine" to the grower, it strikes one that the term is used more as an euphemism than for its generally recognised meaning.—J. C. TALLACK.

—I see that in my note on the above Chrysanthemum (p. 161) a misprint occurs. I wrote "Although no disbudding had been practised, the individual flowers were of good size, as, owing to the fact of the sap having been monopolised by the centre bloom on each shoot, none of the side buds developed." The word "some" having been used for "none," the sentence contradicts the context, and confuses the point of my contention.—S. W. F.

## DEPTH IN CHRYSANTHEMUM FLOWERS.

I AM quite willing to own that, as Mr. Douglas points out (p. 127), I was writing here in expressing an opinion that extreme depth did not necessarily mean added beauty to Chrysanthemum flowers. I do not, however, agree that "all the best judges are agreed in giving good points for depth." It does not follow that a man shall be a judge of what is most beautiful because he is, or has been, a successful cultivator of this or any other class of plant. The standards set up by judges of show flowers, whether Chrysanthemums, Auriculas, Carnations, or what not, are narrow, and no one knows this better than does Mr. Douglas, as he has plainly shown in recent articles.

The main cause of the popularity of Japanese Chrysanthemums is the graceful and artistic

arrangement of the petals, but this grace of form is gradually being lost in the struggle for depth of bloom, which cannot help but make the flowers appear lumpy. Already many of the most striking varieties have had to be put by as useless for showing because of the want of this very lumpiness. I am far from blaming those who are called upon to act as judges. A standard of some kind they must have, and the first thing of which a grower thinks is the skill required in the production of the flowers, and I grant that a skilful and strict attention to details is needed to add depth to the flowers. But many of the newer kinds that are exhibited have to me but little beauty of form to recommend them, and their only claim to the position is that the flowers can be had of great depth. I have before me a catalogue in which the proportions of some of the newer kinds are given. I find one described as neat and 6 inches in diameter by 5 inches deep. Another monster is 9 inches across and the same in depth. I grew last year a variety sent to me as Marquis de Paris. I will not vouch for the name, and cannot now say to what depth it had attained when finished, but I will say that it was out of all due proportion to the diameter. The flowers were remarkable certainly, but remarkably ugly, I thought. And it is not only in cut blooms that this craze for depth obtains. One would think that for groups of plants grace of form would have some weight, if combined with a fair amount of skill in culture and arrangement in grouping; but in one representative show last year the first prize group contained many flowers which had been forced into great depth at the cost of loss of character and beauty. There was not time to dress the flowers, consequently each had here and there tufts of petals which had pushed themselves considerably in advance of their neighbours on the same flower, thus giving the whole group a rough and inelegant appearance. But what were the judges to do? The depth was there and the prize went there too. But when writing my note on Chrysanthemums for the new year I was not thinking of show blooms, and even the wisdom of "the best judges" must not be allowed to force itself on the grower of flowers for decoration, or some of our most beautiful varieties would soon be lost to us.

J. C. TALLACK.

#### SPECIMEN TRAINED CHRYSANTHEMUMS.

ALTHOUGH not receiving so much encouragement at autumn exhibitions as formerly, trained plants have still their admirers. Now is a good time to make a selection of suitable plants for the present year's flowering. Some varieties succeed much better than others under this form of culture. I have drawn up a list of varieties that are especially adapted for this mode of culture. As the Japanese and reflexed sections are better adapted to this form of culture than are the Anemone-flowered or the strictly incurved varieties, I purpose selecting kinds mainly from these sections, making an exception in favour of the small-flowered incurved trio Mrs. G. Rundle, G. Glenny, and Mrs. Dixon. No better specimens are ever grown than those of this trio. Not only are they of free growth, flower profusely, but bear also neatly formed blooms of the true incurved or Chinese form. Although instances occur where some of the largest flowering varieties in the Japanese section are utilised with the best results as specimen plants, they cannot be so much depended on as the small or medium-flowered examples. Of Japanese the following varieties are, owing to their habit of growth and freedom of flowering, deserving of cultivation as trained specimens: Maiden's Blush, creamy white, tinted blush; William Stevens, quite one of the best, bronze-red; Peter the Great, lemon-yellow; William Tucker, rosy-purple; Stanstead Surprise, rose-lilac, shaded gold; Sunflower, rich golden yellow; Vivand Morel, rosy-pink; Roseum superbum, rosy-lilac, shaded buff; Val d'Andorre, orange-red; Triomphe du Nord, bronze-crimson; Margot, rosy-salmon; La Triompheante, white, suffused with delicate purplish-rose; Elaine, pure

white; Mlle. Lacroix, white; Amy Furze, blush-rose with lilac tinge; William Robinson, orange tinted rose; Bouquet Fait, soft rose-pink; and Bertier Rendatler, orange, shaded with yellow and red. Many of the varieties in the reflexed section are well adapted for this mode of culture on account of their free-flowering habit, less tendency to develop irregularly formed flowers, and their adaptability to training, owing to their somewhat natural weeping habit of growth. The Christine family produces no less than five varieties, pink, peach, golden, blush, and the white form generally known as Mrs. Forsyth. Dean Sharpe, rich purple-magenta; Elsie, pale canary-yellow, passing almost to white; Chevalier Damage, deep golden yellow; King of Crimsons, rich sanguineous crimson; Phidias, rose-blush; Wm. Earley, bright rose-purple; and William Neville, deep orange, suffused with red in the centre.

Of pompons we have many deserving varieties; their natural free-flowering habit combined with bushy growth renders them quite suited to this form of culture. Marie Stuart, Anemone pompon, pale lilac guard florets, sulphur yellow centre; St. Michael, rich golden yellow; Black Douglas, rich dark crimson; Mr. Astie, also Anemone pompon, golden-yellow self; Mlle. Marthe, white, shapely blossoms; President, dark rosy-crimson; Marabout, white florets, fimbriated, and the three varieties of Cedo Nulli are the best in this section.

E. MOLYNEUX.

**Chrysanthemum Mrs. F. Thomson.**—I have been surprised not to see included in some of the comprehensive lists of late-blooming Chrysanthemums lately given in THE GARDEN the above variety, as here for several seasons it has proved the very latest of late sorts, and even now (February 29) we have several plants carrying nice blooms—terminals—freely disbudded, consequently are of good size, and the colour—a pretty silvery pink deepening towards the centre—is very attractive, more so than late than earlier. It is a robust grower, carrying abundant foliage which is not addicted to mildew, and although not a variety of recent introduction, I think it may safely and profitably be included in any collection of latest blooming kinds.—J. R.

#### CHRYSANTHEMUM NOTES.

PERSONS who failed to remove their cuttings from outside frames will have cause to remember the year 1895. In some localities where the plan of cool treatment finds favour we hear of almost entire collections being ruined, and it really seems advisable to adopt a safer method of striking the cuttings in all cases. In some past seasons very satisfactory results have followed striking Chrysanthemums in cold frames, but whether this plant is becoming less hardy through the high culture of later days I cannot say. The fact, however, remains that they will not stand frost with impunity. I well remember a large piece of ground in a nursery planted with Chrysanthemums for stock. They grew and flowered, were potted, again planted like hardy border plants, and year after year gave a rich display. The other day I saw some tufts of early-flowering sorts near a wall, which were perfectly safe just underneath the surface, and yet a few yards away in the open roots of Mue. Desgrange were quite dead, these being made secure, it was thought, by placing a mound of leaf-mould over each root. But this last is not one of the hardiest sorts, and if left in the open all the winter it is wise to have other plants coming on under glass to replace them should severe weather intervene. As a rule, white varieties are among the least robust during winter. I have only to instance Avalanche and the newer variety Souvenir de Petite Amie. The cuttings of these present a sorry appearance compared with many of the

yellow sorts at this time of the year, and yet later in the season they are among the most striking in regard to sturdiness of growth. There are many sorts remarkable for fine foliage in summer which do badly in winter. On the other hand, there are kinds which produce stout, healthy cuttings now that by and by exhibit a weakly aspect. Golden Dragon is a very good instance. Boule d'Or, again, a stout grower in its early stages, gives many cultivators trouble by taking on a yellow hue through the growing season. The grand Japanese variety Miss Dorothea Shea, too, has this habit. The mention of the last reminds me of some notes which have lately appeared in THE GARDEN in reference to its height of growth. One writer complained of the variety reaching 9 feet, and for that reason thought of discarding it. Of course, situation and seasons have a great deal to do with the height to which Chrysanthemums grow, but I cannot understand Miss Dorothea Shea showing such an extreme disposition to run up. I have always regarded this as a dwarf grower, or at most a variety of medium height when cultivated for show. With me it has seldom gone beyond 5 feet high. It would be better to try dwarfing by timely topping back than discard so fine a kind as the above undoubtedly is.

Last season I was much struck with a system of growing large Chrysanthemum blooms on dwarf stems, brought into prominence by a fine group at one of the Aquarium shows. Many of the plants were less than 3 feet high and the perfect blossoms were enhanced in beauty by remarkably fine foliage. The mode is to strike the cuttings from now to early April and let one stem only be selected to produce a single bloom. To delay the formation of the bloom bud, pinch back the plant when 6 inches high and in the final potting stage use pots no larger than 7 inches in diameter. Among Ferns and other green plants in a conservatory such specimens would be most effective. A quick and sure method of rooting the cuttings at this time of the year is to plant them thickly in shallow boxes. These may be placed in a greenhouse with a moderate temperature in the full sun, and sprinkled with water each evening. Do not mind if the leaves flag in the daytime; the moisture and darkness will make them stand up the following morning, and in a couple of weeks they will make sturdy little plants. Pot them off singly before there is time for them to become drawn, and then give cool frame treatment. The above is a good plan, too, for obtaining large show blooms of some of the late-flowering American varieties. Curiously, many sorts from this source are very late in giving bloom buds when grown on the well-known system of three flowers to a plant. W. G. Newitt is one, and I believe the magnificent blossoms of the sensational variety Philadelphia were obtained in this way. As there are a number of growers who now have this in their collections, they would do well to take off the tops of their little plants, root them as advised above, and be satisfied with one bloom to each, then allow the parent plant to throw up about two shoots and select the earliest flower-buds. To obtain the best results from this plan, high feeding should be adopted, the roots being confined to so small a space.

Chrysanthemum growers are now busy getting their plants into larger pots. Since the frost growth has been very rapid. There should be little danger now in removing the specimens into cool frames provided there be some means of protection during the night. It is advisable to



use pots of two sizes, namely, 5-inch and 6-inch. If the soil is sufficiently moist, so that it can be conveniently handled without sticking to one's fingers, ram it into the pots with a piece of wood. Loose potting induces a fast growth, but when the soil is made firm the wood and leaves become more solid. Stand the plants well apart, as well as provide abundance of air in favourable weather. At this time of the year some varieties have a tendency to produce flower-buds at the tips of the shoots. Although these are not desirable when the object is large blooms, I should say the plants are not permanently affected, as other shoots soon spring up. The stoutest may be selected and trained upwards. The varieties Viscountess Hambleton and Miss Anna Hartshorn are, perhaps, the most persistent in the above-named habit, and all we can do is pinch the buds off promptly until growing shoots obtain mastery over them.

H. SHOESMITH.

## ORCHARD AND FRUIT GARDEN.

### PEAR CHAUMONTEL.

IN many places this Pear is considered fickle and an indifferent grower and bearer, while in others it is a thorough success and highly appreciated for its large size and rich vinous flavour, together with its good keeping qualities, for though frequently fit for use in December I have had it in excellent condition up to the first week in March. There are numerous causes why this valuable variety should succeed so well in one place and fail in another only a short distance away, and I think aspect, shelter, stock, and mode of pruning exercise the greatest influence on its well-doing or otherwise. If the tree is planted with an aspect facing south, or nearly so, and fairly sheltered from east and west side winds, the position will be admirably adapted to it, and the blooms will set freely and the fruit swell up free from blemishes or other defects. Stock has perhaps more influence on Chaumontel than any other Pear, according to my experience. When grafted direct on the ordinary Pear stock I found the produce scanty and very spotted, but when double grafted the result left nothing to be desired. The finest crops of large fruit that I have ever seen were grown on a tree planted on the gable end of a stable facing due south. On the Pear stock had been worked Pitmaston Duchess, and on that again the Chaumontel. This connection suited the variety famously, as the growth was strong, clean, and short-jointed, and though no heavy crops were produced, they were regular, moderate ones of high quality. For growing as cordons the Quince forms a good stock, and the trees are very prolific if liberally supplied with plant food and otherwise well looked after. Another cause of failure lies in the pruning, for if the branches and spurs are too congested, immature wood and buds follow, and general debility soon sets in. Most practical men are well aware that all varieties of Pears that require a warm situation and soil must be so pruned that every spur or other portion of the tree has sufficient light and sun for the growth to become well ripened, and it is by acting on that principle so many gardeners are enabled to produce Chaumontel Pears that would be no discredit to the Channel Island growers who send us such magnificent fruit of that variety. W. G. C.

**Fig St. John's.**—This new variety is not grown so much as it deserves. I do not know of

any variety more suitable for hard forcing and one better adapted for pot culture. The new Pingo de Mel very much resembles it in colour and size—indeed, it is a richer fruit, but I have not found it such a good forceer, as the latter variety does not carry so many early fruits. It often attains a larger size than the St. John's. I do not know any of the older kinds of Figs which retain the autumn set fruits so well as the varieties named. The habit of the St. John's Fig is compact, so that the trees may be grown in a limited space. For summer fruiting I do not advise its culture, as we have larger and richer fruits, also varieties which give a much heavier second crop. Started in November, there is no difficulty in having ripe fruit in March.—G. W. S.

**Strawberry La Grosse Sucree.**—I am not surprised that good growers pin their faith to this variety for early forcing. I have always given it second place to Vicomtesse H. de Thury. It is strange how seasons affect the varieties, as last year our plants of Vicomtesse were all one could desire. They seemed to revel in the favourable growing season of 1893, and the result was very fine crops of fruit early the following year. This year Vicomtesse is much inferior to La Grosse Sucree, though both are given similar treatment. The crowns of Vicomtesse split badly and the



*Pear Chaumontel. From a photograph sent by Mr. Norman Blake, Bedford.*

stalks are very short. The crowns of La Grosse Sucree are the reverse, being very strong and full of flower, and in most cases single. To the growing season of last year I attribute the weak crowns of the Vicomtesse. Of course the former had the same weather to contend with, but this year they are full of vigour, and plants placed on shelves a month later to follow the Vicomtesse are nearly in at the same time, thus showing how seasons alter the character of the plants and the value of La Grosse Sucree in unfavourable weather.—W. I.

**A new Strawberry.**—The new Strawberry shown by Mr. J. Stevens at the last meeting of the R.H.S. was a surprise to many, as the fruits were equal to the finest forced Strawberries in May or fruit from the open ground in July. We have no knowledge of the parentage of this variety, and really it does not signify, for as a forcing Strawberry it well merited the award it received. In my opinion such fruits, whether new or old if not previously recognised, should get a suitable award. The grower's receipts for the past month from Covent Garden proved its worth for market and for its heavy crop so early in the year. I note that "A. H." (p. 192) gives valu-

able particulars as to its cropping qualities, and so well describes the fruit, habit of growth, and other details, that it is unnecessary to go at greater length into particulars. The grower readily gave advice as to treatment and other details of culture. He relies chiefly upon soot as a manurial agent. The compact growth, with its free-setting qualities, should make Stevens' Wonder Strawberry a valuable acquisition.—G. WYTHES.

**Stocks for Vines.**—No doubt great diversity of opinion exists as to the best stocks for the varieties of Grapes named by R. Katzer (p. 192), and the answers to his query will excite considerable interest amongst Grape growers. So far as my experience of stocks goes for that magnificent variety Muscat Hamburgh, I have found none to equal Muscat of Alexandria for it. Every year I have heavy crops from such a union, many of the bunches being 4 lbs. to 5 lbs. each, with berries of very large size and good colour, ripe early in August, and as the flavour is so superb, they are always wanted immediately they are fit to eat. Some able authorities recommend the Black Hamburgh as a stock for the above, and though I have grown it worked on that variety with fairly good results, I could never obtain the size of bunch and berry as on the Muscat. Madresfield Court, again, succeeds famously on Muscat of Alexandria, also on Black Alicante, and I found little to choose between them; the Muscat stock gave the finest berries, but the Alicante the broadest bunches and deepest colour. Gros Colman and Gros Guillaume, I believe, succeed best on their own roots, provided the soil is of a light and warm character, but where the compost is strong, Muscat of Alexandria for the former and Gros Maroc for the latter are good. At the same time I believe that the Muscat will answer as a stock for any variety of Grapes usually grown in a vinery, as I have yet to see any worked upon it fail to grow well and produce good Grapes.—W. G. C.

—R. Katzer (p. 192) asks as to the best stocks on which to graft Muscat Hamburgh, Madresfield Court, Gros Colman, and Gros Guillaume. Speaking from experience, I would strongly recommend the Black Alicante as the most suitable stock on which either to graft or inarch the Muscat Hamburgh. The finest crop of this grand Grape I ever saw was borne by a rod inarched on to this stock. The bunches were absolutely faultless, being large, well-shouldered, and with fine berries. The Black Hamburgh is usually quoted as the right stock for this capricious Grape, but I have seen many miserable results from the union, the berries shanking wholesale and the colour quite foxy. If R. Katzer has a healthy Vine of Alicante he cannot do better than try the experiment. Madresfield Court will do well worked either on Muscat of Alexandria or Black Alicante. I have it on the former in the early house, and it makes good wood and bears capital bunches, which always ripen well. In a later vinery I have it worked on the Alicante, and yearly large bunches and berries of first-rate quality are produced. I think there can be little doubt that the right stock for Gros Colman is Muscat of Alexandria. I have before referred to the magnificent examples of this Grape grown at Kelham Hall, near Newark, the Vines being inarched on to the Muscat. I have one young rod similarly inarched, and last season the bunch it bore was quite black by the middle of July, the house not having been started until the 1st of February. This season the Vine promises well, having duplicate bunches on every lateral. I

have also heard of several other gardeners who have been successful with Gros Colman on the Museat. As Gros Guillaume succeeds very well with me on its own roots, I have never inched it on to any other stock. The Vine under my charge has a certain amount of bottom-heat at its roots, the hot-water pipes running along the end of the border parallel with the drainage thereby heating the soil for some distance. At another place where the roots of Gros Guillaume are kept warm by hot-water pipes the crop is always even and good.—J. CRAWFORD.

**Pear Beurre d'Areberg.**—I was very pleased with the engraving of this valuable Pear with accompanying notes in a recent issue of THE GARDEN. We seldom hear of or meet with it, which leads me to think it is not so generally known as it ought to be. I have it here as a horizontal tree on a west wall, a cordon on an east wall and an espalier, in all which forms it does capitally. The fruit from the west aspect is certainly the finest. It comes into use during January in ordinary seasons, though in 1893 it ripened in December. It will keep equally as long as that excellent sort Winter Nelis, which is saying a great deal. The flavour is good enough to please even the most fastidious at so late a date, and the size of the fruit is just what one would choose for the dessert.—J. CRAWFORD, Newark.

#### RED SPIDER ON GOOSEBERRY BUSHES.

I NOTICE on looking over my Gooseberry bushes that the bursting buds of many of them terminate apparently in bright red points. On examining these through a lens I find the red points are clusters of minute spiders. Will these do any harm to the opening buds, and if so, what is the best remedy?—R. J. G. READ, *Eding.*

\* \* Many probably anticipate a certain amount of immunity from insect and grub attacks this season, thinking that the severe frosts of last winter must have proved very destructive among such enemies to vegetation generally. All too soon comes evidence to the contrary. Red spider in the open has not only survived, but, judging from R. J. G. Read's note, the pests are numerous on his Gooseberry bushes already. They may not greatly injure the buds, but the young leaves will, unless preventive measures are adopted, be soon overrun and eventually destroyed by them. These minute pests increase with great rapidity and draw so much sap from the leaves as to quickly check their progress, all before very long changing to a sickly colour and dropping off. This, in the case of Gooseberries, means the ruin of the crop, and not infrequently of the bushes too, as, unless they make a certain amount of top growth and retain their leaves long enough for these to perfect a strong bud at their base, the start next spring will be most feeble and the crop *nil*. In all cases, therefore, where red spider has been troublesome in the past timely preventive measures ought to be taken at once, not waiting till much of the mischief has been already done. Sulphur in either a powdered state or in a liquid form is perhaps the best remedy for red spider. A good formula for preparing a composition effective against mildew as well as red spider is as follows: Slake half a pound of lime in a pan, then add one and a half pounds of flowers of sulphur and six quarts of water, mixing thoroughly. Boil gently down to three quarts, keep stirring during the process, and after it has settled strain through muslin and bottle for use as required. Four ounces, or two wineglassfuls to three gallons of water, well mixing and thoroughly wetting every part of the bush by means of a syringe and sprayer, ought to be an effective dose, less sometimes proving sufficient. Sulphide of potassium is a simpler remedy, as in this case all that is necessary is to well mix one and a half ounces of this with three gallons of water and to apply with a syringe. Soap-suds duly strained through a piece of coarse canvas and diluted with an equal portion of clear soft water, frequently applied with a syringe, has been known to keep red spider under, and even

syringing with clear water nearly every evening will do much towards keeping the bushes clean. The stronger insecticides and soap-suds are best applied before the flowering period, and if this is not sufficient, repeat the dose after the fruit is set. Something should also be done towards promoting a more vigorous growth than formerly. Carefully fork away the surface soil down to the roots, and if caterpillars were abundant last season burn it. If the bushes are old, give a liberal dressing of good nearly decayed manure, covering this with soil, while a mixture of loam and manure will be quite strong enough for the younger bushes.—W. I.

#### Protecting tree stems from ground game.

—Adverting to the plan described by "A. D." (p. 171), I lately saw a somewhat novel idea put into practice upon some standard-grown Apple trees. Ordinary fish nets were cut into strips long enough to reach from the branches to the ground and sufficiently wide to cover the stem all round, hanging in folds of two or three thicknesses. The netting was not tied to the stem of the tree, but was allowed to hang loosely. I was told this was an efficient protection against hares.—E. M.

**Disbudding Peaches.**—"Foreman" (page 171) takes me to task for stating that young men are scarce who can properly disbud Peaches. Now although "Foreman" and many other young men no doubt thoroughly understand the work, my experience is that the great majority of them do not, and although there are many larger establishments than that of my friend mentioned in my note (p. 25) or the one I have charge of, the fact that in twenty-five years he has never had a man come to him who had done disbudding bears out my statement, and this in by no means a little place, as there are at least half-a-dozen Peach houses and as many young men in the bothy. Neither have I ever had a young man yet who could be trusted to disbud Peaches when he first came. However, if my article causes more knowledge and increased interest to be spread amongst young men on the matter, I shall be well satisfied. As to there being very many painstaking and energetic young men who can be depended upon to satisfactorily disbud Peaches I do not dispute, and I would only advise them to not neglect opportunities of learning how to do it properly, so that when the time comes they may teach their subordinates.—W. G. C.

**Strawberry Scarlet Queen.**—This is undoubtedly a fine early variety. It is, as regards flavour, infinitely superior to Noble, very early, coming in with me several days before that variety. It is of vigorous growth and crops well. The individual berries do not, however, come quite so large as those of Noble and Sir J. Paxton. One point in its favour is that the foliage is but little liable to mildew, a great recommendation now that Strawberries suffer so much from this pest. Those who want a well-flavoured early variety will do well to try Scarlet Queen.—J. C., *Byfleet.*

**Grape Mrs. Pince.**—Mr. Young does well to call attention to the requirements of this high-class Grape (p. 111). How seldom do we see it in even presentable condition, let alone possessing that high finish which renders first-class examples conspicuous. I know of no variety that will continue to produce such large and shapely bunches, in spite of its somewhat weakly habit of growth, as will Mrs. Pince from the same rods. Close spur-pruning is the method by which the best results are obtained. There is no occasion to encourage vigorous young canes from the base to obtain a regular crop of handsome bunches. So well does the wood mature with rational treatment, that an abundant crop is obtained at a minimum of labour. Although Mr. Meredith when at Guston grew his famous bunches of this Grape in a house devoted entirely to its use, it is not at all necessary to follow that plan to obtain satisfactory results. I grow this Grape along with Alicante, Lady Downe's, Gros Colman, Trebbiano, Madresfield Court, Gros Guillaume, and

Black Hamburgh, and never have any trouble to obtain a plentiful crop of shapely bunches. I generally employ fire-heat liberally with all late Grapes when in flower, as less trouble is experienced in getting a good set.—E. M.

#### APPLE IRISH PEACH.

ALTHOUGH this Apple is one of the most delicious early varieties in cultivation, it is condemned by some as being a shy bearer and unprofitable. While admitting that it is not a very remunerative Apple for market, I believe no other Apple can excel it for home consumption, and though not one of the heaviest croppers, it will produce regular and fair crops if cultivated on correct lines. Many of the shoots are furnished with a terminal fruit bud, and these buds as a rule produce the largest and best fruit. Supposing the pruner shortens back the major portion of these shoots, he is cutting away a large quantity of the finest and best placed fruit buds, and if the crop is light the fault lies not with the trees, but with the pruner. I never shorten back a shoot on Irish Peach unless it is throwing the head of the tree out of balance; the consequence is that most of the shoots in summer are terminated with a handsome Apple, which brings down the shoot by its weight in a gentle curve or arch, and by the check to the sap thus given most of the young branches or shoots are covered with fruit buds, to be followed the following summer with fruit. On standard trees no pruning is done except cutting out any branches that rub or cross each other, and I feel sure that if less pruning were done in this variety very satisfactory crops would be obtained, and it would be appreciated for its general excellence. Irish Peach, like a few other Apples and Pears, is the most pleasing to the taste if eaten the same day as gathered; if kept for a few days or weeks the quality suffers, until finally the flesh becomes mealy. However, if eaten as soon as ripe it is one of the most delicious and refreshing Apples grown, and should find a place in every garden where Apples are grown for dessert. I would suggest to those who have not been satisfied with their crops to try the plan of pruning mentioned; if they do, I think they will alter their verdict on this first-class Apple. W. G. C.

**Pear Leon Leclere de Laval.**—At page 95 Mr. Wythes speaks of two good stewing Pears. I would strongly recommend a third, viz., the above, which I consider the most prolific stewing Pear grown. It seldom misses cropping. When residing in North Hants I had a bush tree of this kind, and for ten years it never failed, although the tree did not grow in a favourable situation. Two years ago I obtained a bush tree, and last autumn I gathered from two to three dozen good-sized fruit from it. The fruits are not large when compared with those of some stewing kinds, but if they are thinned freely they are quite big enough to please good cooks. It is not a strong growing kind, hence it is suitable for planting in small gardens. It keeps well, as I have had it in good condition during February and March. Verulam I too can speak a good word for, having seen it give splendid crops in a most exposed garden in West Norfolk.—J. CROOK.

**Foreign fruit trees.**—I believe that in THE GARDEN last year I warned intending fruit growers against purchasing fruit trees from foreign sources because they could get them at a cheaper rate than from reliable British firms. It may possibly be worth while to repeat the warning, as I find that such purchases are rather on the increase than otherwise. A few days ago I saw specimens selected at random from a large order that had cost about 25s. per 100, poor, miserable things,

with a few inches of growth from the graft or bud, scarcely any roots, and those very dry and parched. If such trees become profitable within the next ten years I shall be astonished, and shall watch results with interest. My experience of these imported trees is not very large, but what few I have had under my charge were the reverse of encouraging, as they made very little progress for four years from planting, and after the lapse of that time they possessed little vigour and the fruit produced was consequently small. It is a very risky thing to buy these foreign trees, as the change of soil and climate may act very injuriously upon them, and it is very possible that, although the original cost may have been low, the trees may in the end prove very expensive. When first-class firms in this country offer maiden trees at about (on the average) 75s. per 100, and which are known to quickly develop into remunerative bushes, it seems absurd to spend money lavishly on what may be an absolute failure.—W. G. C.

#### SHORT NOTES.—FRUIT.

**Apple Winter Peach.**—This medium-sized cooking Apple does not appear nearly so well known as its merits deserve. For use during winter and early spring it is valuable. The skin, at first green, changes to cream colour, the flesh white and the flavour brisk.—E. M.

**Apple Winter Queening.**—This is suitable either for dessert or kitchen, and is especially valuable on account of its late keeping qualities. The skin is pale green, mottled and striped with red. While we have so many early and mid-season varieties we have few late Apples; therefore Winter Queening, though old, should not be lost sight of.—E. M.

**Apple Annie Elizabeth** is a really good late kitchen Apple that deserves more attention than it receives, as it succeeds in a variety of soils. The growth is quite erect. The branches when the trees are young require some little attention in order to give additional light and space to the inner parts of the tree. The fruit is large and prominently ribbed.—E. M.

### FERNS.

#### HARDY EXOTIC FERNS FOR THE WILD GARDEN.

I WAS very pleased to see in Mr. F. W. Harmer's interesting note on "Bog Plants," published in THE GARDEN of February 16 (p. 109), a reference made to certain robust-growing hardy Ferns of North American origin as being plants "which should be more frequently introduced into the choicer parts of the plantations that often surround our English gardens." His well-timed remark that these and "many other hardy exotic Ferns will take care of themselves or nearly so, and that an admixture of the foreign species with English Ferns in the wild garden would make it a much more interesting place than it sometimes is," I consider, most judicious and deserving special attention. In most gardens now-a-days the more plants requiring but little or no attention that can be introduced the better, for in gardening matters, and especially in garden expenditure, economy and retrenchment appear to be the order of the day, and the question of reduction of labour is a point which is carefully studied by amateurs and gardeners alike, especially when applied to outdoor gardening. I fully agree with Mr. Harmer's statement respecting all the Ferns named in his note, which, as he says, are at their best when planted in close proximity to the water, and I quite agree with him as to the uses to which these plants can be put with advantage in the wild garden, where nothing can be more effective than clumps of *Onoclea sensibilis*, *Struthiopteris pennsylvanica*, or any of the *Osmundas* planted by the brook-side.

The three *Osmundas* mentioned in Mr. Harmer's list, viz., *O. cinnamomea*, *O. interrupta*, and *O. spectabilis*, are all equally beautiful as decorative plants, and, on account of their singular mode of fructification, two of these possess a very peculiar appearance, which greatly adds to their attraction. Thus, when fertile,

*OSMUNDA CINNAMOMEA*, which is stated by E. J. Lowe to have been introduced into the Royal Gardens, Kew, in 1772, and which is found in Japan, Manchuria, Brazil, and Mexico, as well as in North America, cannot be mistaken for any other known kind, as the fertile fronds, which rise from the centre of the plant in early spring, are at first densely covered with a woolly substance of a light brown colour, but when unfolded, the abundant spore masses give them the characteristic cinnamon-brown colouring not found in any other known species. The barren fronds soon follow the fertile ones; they are regularly disposed and form, as it were, a magnificent light green vase, within which the brown plumes of fructification stand erect. Equally distinct and striking is

*O. INTERRUPTA* or *CLAYTONIANA*, which, though considered a North American species, has, according to Col. Beddome, been found on the Himalayas up to 10,000 feet elevation. Its barren fronds, which form the outer part of the plant, are of a bright pea-green colour and soft texture, while the fertile ones, which are usually taller, stand close together, nearly upright in the centre of the crown. They never bear fructification at their summit, as is the case with our *O. regalis*, nor are they ever totally fertile like those of *O. cinnamomea*; their fertile leaflets are situated somewhere near the centre of the frond, most frequently a little above the middle.

*O. SPECTABILIS*, also found in gardens under the name of *O. gracilis*, is of less dimensions than the foregoing; it is a charming delicate looking Fern, also native of North America, producing in great abundance its slender fronds of a peculiarly metallic-green colour, and seldom more than 15 inches long.

*Nephrodium Goldieanum*, *N. intermedium*, and *N. marginale* are all strong-growing North American species, producing their massive fronds from occasionally agglomerated, but usually solitary crowns, and the same remarks also apply to *Athyrium Michauxii* and *Aspidium acrostichoides*; while, on the contrary, *Cystopteris bulbifera* and *Woodsia obtusa* invariably show clustered or agglomerated crowns. The former,

*CYSTOPTERIS BULBIFERA*, a singular and elegant species, taking its name from the large fleshy bulbils borne on its upper leaflets, is essentially a North American species, but quite as hardy as any of the British kinds. It is found growing wild on dripping rocky banks and in moist places amongst rocks, and sometimes where there are no rocks, from Canada and New England to Tennessee, and westward to Wisconsin and Arkansas. Its fronds, which are of a thin, papery texture, and which wither at the first appearance of frost, seldom exceed a foot in length. The bulbils, by which this species is readily distinguished from all others and by means of which it is easily propagated, are usually disposed at the base of the leaflets on their under side.

Eaton states ("Ferns of North America," vol. ii., p. 190) that

*WOODSIA OBTUSA* grows on moist rocks and stony hillsides, and is not rare from New England to Wisconsin and Georgia and Central Alabama, but always in damp positions. Although this is the strongest growing species known, its very elegant fronds seldom measure more than a foot in length.

Although they are quite hardy and may be easily acclimatised in this country, all the foregoing being plants producing their fronds from crowns do not spread so rapidly as the follow-

ing, also contained in Mr. Harmer's list, and which are provided with rhizomes spreading apace and taking firm possession of the ground whenever they find themselves in a suitable position, that is to say, a naturally damp place and a ground formed in greater part of decayed vegetable matter. It is in such situation and exposed to the action of the air, though not of the full sun, that the beautiful

*ONOCLEA SENSIBILIS*, which Lowe tells us is the oldest of exotic Ferns introduced to Europe, having been imported from North America in 1699, is seen in all its glory. Its barren fronds, which under these circumstances, as stated by Mr. Harmer, attain 3 feet in length, are of very pleasing, soft pale green colour above and slightly bluish on their underside. They are very sensitive to cold temperature, for the first autumn frost generally destroys them. The fertile fronds, which are sparingly produced, are so unlike the barren ones, that they do not appear as if related to each other; they are about half the height of the barren ones, perfectly rigid and nearly black when fully developed, and instead of being cut down by the frost they dry up in winter, but remain erect during the following summer, so that a fruiting plant often bears fertile fronds of two years' growth.

*ADIANTUM PEDATUM*, the Canadian Maiden-hair Fern, is the only *Adiantum* which we know as perfectly hardy here, and we have it on the authority of E. J. Lowe that in January, 1854, plants of *A. pedatum* lived out of doors with the temperature of 6° below zero of Fahrenheit's thermometer. It is possible that if in some places in England failure has attended the attempt at acclimatising this species outside, it is due to the fact that the underground rhizomes are generally kept too close to the surface of the ground, so that they are not protected in winter by either leaves or snow, and thus feel more keenly the effects of cold, though usually less severe than that of its own country. It is a plant of thoroughly distinct habit, its bird's-foot-shaped fronds, of a pale green colour and delicate texture, borne on long black or dark purplish stalks, attaining about 2 feet in height and forming good bushy masses of foliage. Eaton, in vol. i. of "Ferns of North America," states that in Canada this Fern grows abundantly in moist woods, especially among rocks, and that in such places it forms under the shelter of trees patches covering several acres at a stretch. In such a position the underground rhizomes often lie buried 6 inches deep, or even more in decayed vegetable matter produced through the annual fall of leaves, the fronds having to penetrate through this before they reach the surface of the soil. According to eye witnesses, these masses of *A. pedatum* with light pea-green foliage are a grand sight.

*POLYPODIUM HEXAGONOPTERUM*.—This essentially North American Fern is found in moist woodlands from Canada to Florida, where it delights in a naturally cool position and in a soil of a moist, spongy nature. Its slender and wide-creeping rhizomes, sometimes 1 foot long and of a somewhat fleshy nature, creep just beneath the surface of the ground, and its handsome fronds, which in shape somewhat resemble those of our common Beech Fern, but attain much larger dimensions, are of a particularly pleasing light green colour and produced abundantly through the whole summer.

*STRUTHIOPTERIS PENNSYLVANICA*, commonly known in North America as the Ostrich Feather Fern, is described by Eaton in vol. ii. of "Ferns of North America" as being one of the finest Ferns of the New World, for he states that "Its grand, vase-like circle of foliage is often higher than a man's head and sometimes extends above his utmost reach, its barren fronds attaining 10 feet in length." It has never come to my knowledge that the plant has attained such dimensions in this country. The places where the plants mentioned by Eaton were found growing were low grounds of fine alluvial soil, subject to the overflow of rivers from the Saskatchewan and Lake

Winnipeg to New Brunswick, and southward to Pennsylvania and Illinois. In such position the underground rhizomes or stolons, which extend to very long distances, are produced in great quantities and very soon form quite a little forest of young plants. As in the *Onclea sensibilis*, which also thrives best under similar conditions, the fertile fronds, entirely distinct from the others, are much shorter than the barren ones and much contracted. They are produced only in the autumn or late in the summer, and disposed in the middle of the crown, where they stand perfectly erect.

To the list of hardy exotic Ferns given by Mr. Harmer may be added several species provided with rhizomes, such, for instance, as

*DICKSONIA PUNCTILOBA*, also a native of North America, where it is known under the popular name of Hay-scented Fern. Its finely-cut and very elegant fronds, about 18 inches long, are abundantly produced from slender rhizomes, which creep extensively 1 inch or 2 inches below the surface of the ground. In its native habitats it is found growing in moist woods and often in low, grassy places. It is, according to Eaton, a common Fern in New Brunswick, Canada and the Middle States of North America.

*WOODWARDIA AREOLATA*, or, as it is also called, *W. angustifolia*, is a very handsome species of medium dimensions and essentially of North American origin, being, according to Eaton, plentiful in certain localities from Massachusetts to Florida and Louisiana, where it is found growing in swampy woods and apparently never very far from the rivers. The fertile and barren fronds in this species are totally different; the latter, by far the more abundant, are about 2 feet long, while the fertile ones are considerably taller and borne on longer and much darker coloured stalks. In

*WOODWARDIA VIRGINICA* we have another North American species especially adapted for cultivation along the water edge of our brooks and ponds. Eaton, in his splendid work "Ferns of North America," speaking of this particular plant, gives its range of habitat as from Canada and New England to Florida and westward to Louisiana; he also states that it grows in swamps often where the depth of water renders the plant almost inaccessible, and that in seasons when the ponds are nearly dry the root-stock may be traced a long distance from the fronds, as he has personally torn up a root-stock or rhizome 10 feet long and over 6 feet undecayed. This rhizome, which is nearly as thick as a man's little finger, irregularly branched, soft and fleshy, creeps just beneath the surface of the firm mud at the bottom of the shallow ponds in which it prefers to grow.

These, intermixed with such of our own British Ferns as *Osmunda regalis*, *Lastrea Thelypteris*, numerous forms of *Lastrea Filix-mas* and *Scolopendrium*, all of which enjoy a wet or constantly moist position in the wild garden, would when once established require no further attention, but year by year produce their elegant foliage, which would form a special feature in the natural garden, as other Ferns of a more tender nature do in a winter garden. All the above-named plants are perfectly hardy, even such a winter as the late one having no ill-effects upon them. With a little care and attention, several of the Japanese Ferns usually grown in houses could also be used with advantage for planting out-of-doors, and by their bolder and more massive foliage produce a splendid contrast in the wild garden. Among these may be noted *Cyrtomium anomophyllum* and *C. falcatum*, *Lastrea Standishi*, *Lastrea atrata*, *L. opaca*, and *L. erythrosora*, *Polystichum setosum*, *Dietyogramma japonica*, &c., all of which are already well established in the woods of some favoured and sheltered English gardens. A covering of dry leaves over the crowns is all the protection they receive during the winter, at other times requir-

ing no more attention than any of the commonest of our British Ferns. Mr. Harmer's remarks respecting the damp position most favourable to the Ferns he names and to others goes far to prove the fallacy of "giving a rest" to hardy Ferns grown in pots and keeping them, as many people still do, dry at the roots from November to February or March, at which time it is found that some have taken to "slumbering" to such an alarming extent, that they cannot be awakened even by the spring rains and the warmth of summer days, while those which after a long spell of dry treatment can be induced to make a start are usually very weak, and show unmistakably that the "rest," instead of having been beneficial to them, has really weakened their constitution to a very great extent. This is very easily accounted for, as if we observe the course of Nature we find that, instead of our native Ferns being dried up in winter, it is during that portion of the year that they are naturally provided with the greatest abundance of water at the roots. In the case of such species as *Polypodiums*, *Blechnums*, *Asplenium* *Adiantum-nigrum*, which are usually found growing on hill-sides, amongst bushes and under the hedges, the rain-water, more plentiful in winter than in summer, reaches them more readily and in much greater quantity on account of the trees and bushes overhanging them being deprived of their foliage, in consequence of which the ground under them is kept constantly wet during the period of four or five months of autumn and winter. As regards *Osmundas*, *Scolopendriums*, certain *Lastreas*, *Athyriums*, many of these are found growing wild in low-lying districts where for weeks, sometimes even for months, they are kept totally under water through the annual overflow of some river or an excessive quantity of rain. It is therefore evident that a resting or dry treatment of hardy Ferns, British or exotic, while they are in a dormant state is pernicious to them, as it causes their crowns to become annually weaker and weaker. Those species provided with rhizomes on which the plants are dependent for the strength of their new growth become shrivelled and in course of time thoroughly exhausted, instead of increasing in numbers, size and vigour, as they do when in a wild state and under the influence of natural and constant moisture. It may safely be said that with Ferns, as with most other plants, it is by far the best to imitate Nature as far as practicable, a course which in this case may be followed without trouble or inconvenience and at very little expense. DOODIA.

*Onclea sensibilis*.—Mr. Harmer's note on this (p. 109) is instructive and interesting. He very properly shows my treatment of this plant as somewhat opposite to Nature. I did convey the idea of growing it on a dry bank, whereas the habitat of the species is the cold swamps of Canada, but it did not belong to the theory that I was then discussing to give an explanation why I so planted it. I feel called on now, however, to do so. If you take a plant native of a cold, swampy habitat in colder latitudes than our own, unless you employ some counterbalancing means, you get the plant into much earlier growth than is desirable. That would not matter so very much, but this Fern chanced to be one whose young fronds cannot endure our late frosts. My point therefore was to give it a set of conditions that would hold it back from early growths, and so prevent injury to what should be the finest fronds. I am successful in this respect, and as evidence that the big sand-stones under and around which the rhizomes run afford the desired amount of moisture, the one plant set, perhaps, eight years ago has spread immensely. Do we not also find other plants respecting which it

would be better could we keep back their early growths, for instance, *Dicentra spectabilis*, from Siberia? Still further, we also find that some plants found wild in moist or boggy surroundings do better in this country treated as ordinary border plants, such as the Pampas and other Grasses.—J. WOOD.

**Ferns for a wall** (*H. F. K.*).—The following are among the most suitable Ferns of rapid growth which may be used for growing on a wall in a fernery with average temperature—55° to 65°:—

<i>Adiantum capillus-Veneris</i>	* <i>Phlebodium aureum</i>
<i>Mariesii</i>	* <i>Polypodium nigrescens pustulatum</i>
<i>cuneatum elegans</i>	* <i>verrucosum</i>
<i>fragrantissimum</i>	<i>Pteris cretica</i>
<i>venustum</i>	<i>albo-lineata</i>
<i>Blechnum lunceolatum</i>	* <i>longifolia</i>
<i>Hypolepis distans</i>	* <i>Stenochlæna scandens</i>
* <i>Nephrolepis davallioides</i>	* <i>Woodwardia radicans orientalis</i>
* <i>furcans</i>	
* <i>exaltata</i>	
<i>pectinata</i>	
<i>tuberosa</i>	

Others, such as *Davallia bullata*, *decora*, *dissecta*, *elegans*, *immersa*, *Mariesii*, and *Tyermanni* are also very suitable for that purpose, but their growth is not so rapid as that of the above-named species. The plants marked \* are the largest growing kinds. As yours is a light place with no creepers covering the roof, you should have no difficulty in growing and flowering—

<i>Abutilon Boule de Neige</i> (white)	Begonias of sorts
<i>Boule d'Or</i> (yellow)	<i>Gardenia citriodora</i>
<i>Sanglat</i> (bright red)	* <i>Gloriosa superba</i>
* <i>Eschymanthus Lobbianus</i>	* <i>Hoya carnosia</i>
* <i>grandiflorus</i>	<i>Impatiens Sultani</i>
* <i>splendidus</i>	<i>Libonia floribunda</i>
<i>Anthurium Scherzerianum</i>	<i>Meyenia erecta</i>
<i>Andraeanum</i>	<i>Rivinia humilis</i> (scarlet berries)
* <i>Aristolochia elegans</i>	* <i>Stigmaphyllon ciliatum</i>
	<i>Torenia asiatica</i>
	Baillonii

If you wish to have Orchids to flower in such a place, the most suitable are *Ada aurantiaca*, *Cochlidia Noezliana*, *Celogyne cristata* and *C. ocellata*, *Dendrochilum glumaceum* and *filiforme*, *Phaius grandifolius*, *Zygopetalum crinitum* and *Maekayi*. The plants marked \* are of a climbing nature.

**The black Vine weevil**.—In taking down part of my fernery (cork), amongst the soil were some small maggot-like insects. To-day I repotted some *Adiantums*, and in one 8-inch pot I found thirty-four of the same kind of maggot, a few of which I send you. Will you oblige by saying what they are, and how to prevent breeding, and mode of capture?—WM. LEE.

\*\* The maggots you find at the roots of your Ferns are the grubs of the black Vine weevil (*Otiorhynchus sulcatus*). Besides destroying the roots of Ferns they attack those of *Primulas*, *Cyclamens* and various other soft-rooted plants. The beetles you find later in the season in your Ferns at night are the parent insects; they feed on the foliage of many kinds of plants, and are particularly fond of Vines. I do not know of any practical way of destroying the grubs but picking them out from among the roots. It is almost impossible to make insecticides reach them without injuring the plants. As regards destroying the beetles, you cannot do better than search for them with a light, as you have done. Laying the plants on their sides on a white sheet during the day is a useful thing to do, as the weevils sometimes drop off as soon as a light at night shines on them. If they fall into the pot among the stems of the fronds they are not easily seen, but on a white sheet they cannot escape notice.—G. S. S.

**Grubs infesting Maiden-hair Ferns**.—In reply to the enclosed from F. Thirlby, the grubs you find under the crowns of your Maiden-hair Ferns are those of the black Vine weevil (*Otiorhynchus sulcatus*), a common and most destructive pest. These grubs live at the roots of many kinds of plants, *Cyclamens*, *Primulas* and Ferns being their special favourites. From their posi-



TEA ROSE DUCHESSE D'AUERSTÄDT.



tion it is impossible to make any insecticide reach them with sufficient strength without injuring the plants, so that searching for the grubs at the roots is the only practicable way of getting rid of them. The weevils are also very injurious; they feed on the leaves and young shoots of various plants, Vines being very attractive to them. They are about three-eighths of an inch in length and entirely black in colour. The head is produced into a long snout, which bears a pair of longish antennae. They feed at night and are seldom seen during the day, as they hide themselves most carefully under some shelter. When a plant is found to be attacked by them it should be laid on its side if possible with a white sheet underneath it; then when it is dark it should be carefully searched with a strong light. The insects often fall when disturbed, and they may then be caught on the sheet. The plant should be suddenly tapped or shaken, in order to make them fall.—G. S. S.

## GARDEN FLORA.

### PLATE 1007.

#### THE CLIMBING DIJON TEAS.

(WITH A COLOURED PLATE OF DUCHESSE D'AUERSTADT.\*)

THE vigorous climbing Dijon Teas are appropriately named, because they all in a great measure possess the distinctive merits of that noble Rose. Those who would cover their walls with Roses of undoubted hardiness and have flowers for a long season will not be disappointed if they grow the best varieties in this section. Not only on walls, but elsewhere about the garden these Roses should be planted where there is no necessity to restrict them. A few of the more recent additions to this class appear to need the several benefits that follow from growing them upon a wall, but even these abundantly repay the cultivator who, having found out their requirements, endeavours to supply them. Although all the best of the Dijon Teas have been enumerated at different times, it will perhaps be a useful guide to some if their names are once more given and their distinctive or special merits briefly stated:—

**GLOIRE DE DIJON**, known to every lover of Roses, needs no praise. On walls, on fences in any aspect it flowers finely. It should also be planted in bold masses in the garden away from any structure.

**BOUQUET D'OR**, another most important kind, is one of the grandest Roses in our gardens. It blooms more abundantly than Gloire de Dijon, whilst its flowers are of better shape—in fact, it is the very best of this race, good always on walls, fences, or as a large mass in open beds and borders. It was figured in *THE GARDEN*, February 22, 1890.

**MME. BERARD**, a very handsome, full, well-formed Rose, is easily distinguished by its long red-barked, almost thornless shoots. It is a vigorous grower, rather subject to mildew against walls in a sunny aspect, but not so liable to this pest on fences. As a bush it also does well. Its flowers are pale salmon fringed with yellow, which deepens into a rose tint.

**EMILIE DUPUY**, another distinct kind, produces flowers of great substance. The bud is so hard as to give an impression that the flower can never come to perfection, but gradually it unfolds into a bloom of splendid form, the colour a clear pale fawn-yellow. Some have found a difficulty in distinguishing this Rose from Bouquet d'Or, but it is easy to do so. Emilie Dupuy invariably produces one flower on a lateral shoot, whilst Bouquet

d'Or gives clusters of three or more. This Rose was figured in *THE GARDEN* of May 10, 1890.

**DUCHESSE D'AUERSTADT**, now illustrated, and one of the more recent additions, does not quite reach the high standard of general merit that characterises all the preceding varieties. It has come rather short of the early estimate that was formed of its worth. Sent out in 1887, a summer of unusual brightness, the sun favoured the production of splendid flowers. It is said to be a seedling from Rêve d'Or, and possesses extraordinary vigour. The flowers shown in the accompanying plate were cut from large bushes growing in an open border. A wall with a sunny aspect will give the best results with flowers of the richest colour, yellow, deepening into nankeen in the centre. The petals are thick, and the flower one of great substance.

**HENRIETTE DE BEAUVEAU**, also sent out in 1887, is a satisfactory Rose on a wall with plenty of room to lay in its long rambling shoots. Its flowers, freely produced, are of a clear canary-yellow colour and very sweet-scented.

**MME. CHAUVRY**, which first appeared in 1886, is the result of a cross between Mme. Berard and W. A. Richardson. In its leafage, comparatively thornless shoots, form and fulness of flower it partakes closely of the character of the former parent, whilst its colour is a rich, deep apricot-yellow. When first sent out it flowered well in the open and upon walls, but it does not seem to have found much favour yet in gardens.

**KAISERIN FRIEDRICH** is one of the most recent additions deserving mention. It is said to be a cross between Gloire de Dijon and Perle des Jardins. It has the vigorous climbing habit and handsome foliage of the Dijon varieties, producing flowers of a pale fawn yellow, which especially in autumn have rosy suffusions of colour.

**MME. B. LEVET** and **MME. EUGENE VERDIER** may be taken together, as they agree in being decidedly shy bloomers, though lovely and distinct in shape and colour, the former clear lemon-yellow, the latter deep orange-yellow, both exquisitely sweet-scented.

A. H.

## THE WEEK'S WORK.

### THE KITCHEN GARDEN.

**EARLIEST TOMATOES.**—Plants for producing ripe fruit in May which were sown in January and duly shifted into 4½-inch pots will now be ready for removal into their fruiting pots. If the happy medium has been aimed at in regard to temperature, long-jointed, leggy plants will have been avoided, and the extremities of the leading growths will already be showing flower. In potting this early lot I always cut off several of the lowest leaves and sink the plant well into the pot. By this means additional roots are emitted from the stem, and the first clusters of fruit are brought nearer to the bottom of the trellis. Use 10-inch pots, drain well, and have good holding loam, adding road grit or mortar rubble as a corrective. Grow the plants as near the roof glass as possible, training to a wire trellis on a single stem, and keep all side shoots closely pinched. A temperature of 60° at night is very suitable, admitting air freely on all fine days, but avoiding cold currents, closing early to make the best of sun heat. Beware of animal manure in potting, as this induces rank, unfruitful growth, and a stimulant can always be applied when the crop is set. Avoid also freshly cut turf, as if this contains any wireworm they will probably tunnel up every stem and ruin the plants. Soil that has laid a twelvemonth should always be used. I do not approve of syringing overhead, nor yet of shutting up with too much atmospheric moisture. This encourages weak flower-trusses and makes way for disease. An inch of soil is quite sufficient for covering the roots with at first, slight top-dressings being given as new colonies of fibres show themselves. Early in the year artificial fertilisation is needful, no damping of floors being practised in

the forenoon, that the pollen may have a chance of drying. Plants raised from cuttings last autumn and which were potted on early in the new year are now yielding a useful lot of fruit. As soon as the limit of trellis room has been reached and a full crop set, give the last surface dressing of loam and farmyard manure. This will aid in swelling up fine fruit. Do not, however, apply it until the above-named stage is reached.

**MAIN CROP PARSNIPS.**—The present is the best time in the majority of gardens to get in the main crop of this nutritious vegetable. For an early row a week or two since I recommended the old Hollow Crowned variety. Now, however, the Student is to be preferred. A good depth of friable soil free from large stones must be chosen if symmetrical well-flavoured roots are required. Give plenty of room between the rows and tread very firmly both before drawing the drills and after the seed is sown. If the ground is not in good condition, do not dig in strong manure, but rather stir in some approved fertiliser and give additional broadcast supplies when in free growth.

**MUSHROOMS.**—As a rule it is not advisable to make up fresh beds in the majority of houses after this date, as by the time the spawn is in full operation the sun raises the temperature to such a degree that unsatisfactory growth coupled with wholesale attacks from grub generally ensue. In isolated houses, however, favoured with special shade and coolness, even April-formed beds sometimes prove fertile and lasting. Beds now in bearing should be encouraged to last their normal time by maintaining a cool moist atmosphere, using little or no fire-heat. Much more water will also be needed on the surface of the beds than heretofore, but this must still be applied in a luke-warm state and saturation must be guarded against. Sometimes apparently exhausted beds may be again brought into a more or less productive state by soaking them well through with warm water, into which a medium quantity of salt has been stirred.

**OPEN-AIR BEDS.**—Where an all-the-year-round supply is necessary, it is advisable to have a couple of good large beds in the open air; the first of these to be made up at the present time for May bearing, the second following six or seven weeks later on. In forming such beds position is of much importance. I do not advise a north aspect, as these beds must be made of good depth, and if gloomy, unless weather occurs in May and June, the heat is not maintained sufficiently to induce the spawn to run freely and the yield is consequently unsatisfactory. I have seen good crops from beds made beneath large trees, the foliage shading from the direct rays of the sun by the time shade is most needed. No fear need be entertained of drip, as if the beds are made in ridge form, which is the best, they can be well covered with Bracken or straw and wide boards nailed together and placed on either side, meeting at the top and making the whole waterproof. It is sometimes difficult to obtain sufficient horse droppings for such spacious beds, but dry Oak or Beech leaves may be added in the proportion of one part to four of the horse manure. Some good tuffy soil may also be incorporated. If the spawn is inserted when the heat stands at 90°, the bed may at once be soiled and covered down, as there is not much fear of any reaction, which sometimes occurs in beds under cover.

**CUCUMBERS.**—January-sown plants will now be coming on apace, and will soon supplement the winter fruiterers which are still bearing freely. If any extra early fruit is formed on the main stem or on the first laterals, it will be wise to remove it. If there is ample room for the plants, do not pinch too rigidly, but allow the growths to extend somewhat, reducing their numbers if too crowded. This will encourage the formation of a multitude of roots and lay a good foundation for free and continuous cropping. As each fresh colony of young roots appears surface the bed with good rough loam and road grit, adding a little artificial manure in the case of weakly

\* Drawn for *THE GARDEN* at Gravetye by H. G. Moon, July 14, 1894. Lithographed and printed by Guillaume Severeys.

plants, but withholding all stimulants where growth is strong enough. A night heat of 70° when mild weather prevails will be suitable, closing early and dewing the foliage over with tepid soft water. The floors also must be kept moist by sprinkling thrice daily. Where plenty of house room is at command another sowing may now be made for succession. I always grow Perpetual Bearer for first and second earlies, as it possesses every good quality which may be expected in a Cucumber. Much bottom-heat after this date will not be necessary when sowing, as if the pots are stood on Moss on warm kerbs or shelves and the soil kept on the dry side, the seedlings will appear in a few days. When sowing, leave a slight margin for earthing up later on; this will steady the plants and induce new roots.

J. CRAWFORD.

### FRUIT HOUSES.

**FRUITING PINES.**—If the advice given previously has been followed the early fruiting Queens will now be making good progress. During February little growth was made, the severe cold and lack of sun being unfavourable to the plants. The plants now throwing up their fruits freely will need encouragement in the way of liquid food and a moist atmosphere to induce robust growth. If the bottom-heat is supplied by hot water there will be no difficulty in maintaining a temperature of 85°, and it is well to shift the plants about as little as possible at this stage. I previously noted the importance of securing a steady bottom-heat at this season. Many plants will be in flower, and being later than usual will need plenty of assistance, but during the flowering period syringing overhead should entirely cease. After the plants are past the flowering stage more moisture is necessary. Many good growers do not damp overhead till the flowers are set. Should the bottom-heat get low lose no time in adding fresh warm material, doing the work carefully and quickly. The plants after this date will take regular supplies of weak, tepid, liquid manure or guano water, and the spaces between the plants may be occasionally damped over with the fertiliser. This charges the atmosphere with ammonia and promotes a luxuriant growth. The evaporating pans may also be filled at times with weak liquid manure. It is well now to keep the plants in a uniformly moist state, but avoid excess or saturating the soil. Large plants that have failed to fruit will need different treatment. It is advisable to stand them at the coolest part of the house, keeping them rather dry at the root till they push up their fruit. The house should be closed early, allowing the thermometer to rise, at the same time syringing freely, the night temperature being as near 70° as possible, with an increase of 5° to 10° during the day and air on. Keep a sharp look-out for drip in badly glazed pits, as this soon ruins a good fruit in its early stages. In dull weather it will be found best to damp only the floors and walls.

**SUCCESSION FRUITERS.**—The large plants of Smooth Cayenne, Rothschild and Jamaica will now be growing freely. To these should be added the late batches of Queen. Repotting of growing stock should now be general. If any of the plants are starved or in a sour condition, careful repotting will not prevent the plants fruiting, but they will require careful watering and regular warmth at the roots for a few weeks. Large plants at all loose should have some pieces of dry turfy loam packed round the collars and the surface made firm. Succession plants requiring a good shift, if at all dry at the root, should be gradually moistened with tepid water before repotting and the plants encouraged to grow freely. The compost, pots and clean drainage should be all prepared before the work commences, so as to get through the potting as expeditiously as possible. After potting give a liberal bottom-heat, say 85° to 90°, and the water used should be of the same temperature as the bottom-heat, but the plants must be kept on the dry side till new roots are made. In potting it is well to ram the soil as

firmly as possible, and with robust plants to mix a small quantity of bone meal and soot in the compost. Many growers use bones as drainage, but I prefer bone meal in the soil; the roots find it more quickly and get more benefit.

**YOUNG PLANTS.**—Many will this season have deferred potting up late suckers of last year and the general stock of what may be called the late successions. A few of these potted up early last season will be strong enough for a final shift. They may be treated as advised for succession fruiters and placed in that division, thus getting more generous treatment. The unfavourable weather having delayed potting, it is well to push on with the work now and to get a liberal quantity of heating materials for bottom-heat in readiness, if the small plants are grown in frames or pits not heated by hot water. Obtain the best fibrous loam possible and preserve it in a nice condition by placing under cover. Shake out all fine or dusty particles and use such additions as advised for larger plants (bone meal and soot), with abundance of clean drainage. Plants in 6-inch or 7-inch pots if strong and healthy will now require pots four sizes larger. In repotting remove old drainage and loose soil and spread the roots out at the base on the new material. Plunge in a bottom-heat of 85° to 90°, give a night temperature of 60° to 65°, and 5° to 7° higher by day, syringing walls and surfaces, but only water the plants sparingly till new root-growth is made. Small or late suckers may have a shift, and any plants sour or deficient of roots should be shaken out and repotted in small pots.

**EARLY FIGS IN POTS.**—The weather during the early part of the year was most unfavourable for early forcing, and the first crop will with some varieties be thin. The newer kinds, St. John's and Pingo de Mel, appear to set a first crop with more freedom than any varieties I have grown. Small plants in 10-inch and 12-inch pots carry a lot of fruit, and with care will ripen well. Plants in a small pot and with much leafage require a lot of food in the way of liquid manure, but few fruits resent excess of water so much as early pot Figs. If at all saturated, the fruits turn yellow just before the final swelling and drop. It is important to have free drainage and to use the liquid manure and water in a tepid state, soot water given in a clear state being a valuable fertiliser. As the ripening period approaches the syringe must be used with care, well damping all available parts of the trees, but not directly on the ripening fruits. These soon burst if ripe. The flavour of the fruit is much improved if left till the last moment. To get flavour it is important to give plenty of light, removing all superfluous growths and ventilating freely in warm weather, shutting up early to retain sun heat and charge the air with moisture. Plants that have not been top-dressed should receive attention, as the trees will repay for extra food which assists in forming a heavy second crop. The earliest pinched shoots will ere this be growing away freely and the small Figs swelling. These require liberal treatment. All later growths should be stopped as advised for earlier shoots at the fourth or fifth joint, and small, weak wood removed entirely. Suckers at the base must be removed, and as soon as the first fruits are gathered a temperature given similar to that for early Vines.

**SUCCESSION FIGS AND PLANTED-OUT TREES.**—It is not often necessary to thin out the first crop of fruit on planted-out trees. Last year the fruits set very thickly, doubtless owing to the favourable season of 1893 ripening the wood. Where thinning is necessary, no time should be lost in going over the trees. Stopping will be the most important work, and must be attended to well into July, when the second growths must be left to ripen. Trees that are at all weak should be fed, giving a good mulch to those cropping freely; others that are shy fruiters should get plenty of moisture, but it is not wise to feed, as Figs which fruit sparingly have a tendency to grossness. Trees with their roots restricted to a certain space crop better, and feeding may be readily adopted, giving dressings of turfy loam, with a

liberal quantity of manure and bone meal added. The temperature may now range from 60° to 65° at night, with an increase of 10° to 15° by day, syringing freely twice a day, closing early and damping all parts of the house. Should rust appear on the foliage, overhead syringing must be done with care. It is well to have the foliage dry by sunset and to admit a little air early in the day; this removes moisture, makes the leaves stouter, and the new growths less sappy. By treating permanent trees well there is a good second crop, and though the fruits will be smaller, there will be more of them and of first-rate flavour. Crowding the wood is the greatest evil at this stage, and those who want quality in the fruits will do well to admit plenty of light, removing shoots not required and avoiding a high night temperature.

**HARDY FIG TREES IN THE OPEN.**—These will in many gardens have been closely covered, and it is well to gradually uncover after severe frost. Many who did not cover their trees will this season have had them cut down to the soil, and in such cases it will be impossible to get fruit this season. The grower must endeavour to build up strong fruiting wood for another year. In the selection of wood it is well to bear in mind that strong sappy shoots do not furnish the fruit. The new growths must be well thinned and freely exposed. Trees that are only slightly injured should now be pruned, lightly cutting out dead wood and naked branches. By this means the centre of the trees is kept well furnished with young fruiting wood, and there is less loss in severe seasons. I do not advise laying in much sucker growth, but hard, firm shoots which spring from the leading branches. In training keep the trees close up to the walls. It is well to restrict the leaders to a certain space, as they bear little fruit when not kept in check. The Fig produces so much weed annually that there is little difficulty in laying in plenty of good wood close to the main stems, and as the fruits are produced on the points of last year's growth, sufficient of this should be nailed in to furnish a crop.

G. WYTHES.

### ORCHIDS.

#### SEASONABLE NOTES ON ORCHIDS.

WE are now commencing the growing season for Orchids, and increased supplies of moisture will be required both at the roots and in the atmosphere. The ventilation still requires the greatest care, as advised in previous notes. All shading should by this time be fixed, as the sun is now very powerful. This must not be let down except during the hottest part of bright days, raising it again about 2 o'clock at the latest, and closing the warm houses with plenty of moisture. Where cool Orchids are grown in a span-roofed structure running north and south, the shading must be right down until 3 o'clock or later according to the weather, keeping the day temperature as near 60° as possible. Among the many Orchids that require repotting or surfacing now will be the latest plants of *Laelia anceps*, also the spring-flowering *Dendrobis* as they go out of bloom. These latter should be kept in as small pots as possible, especially the deciduous group, as *D. Bensoniæ* and *D. crassinode*. After potting, water must be judiciously applied, or the young shoots will be apt to damp off. Sudden exposure to strong sunlight is also very injurious to these after being repotted, as however carefully done, it is to a certain extent harmful by checking the progress of the roots. *Lycastes*, *Zygopetalums*, *Oncidiums* of the *Marshallianum* type, and any plants in the cool house that are not in good order at the roots may now be attended to; also many *Cattleyas*, as *Trianeæ*, *Percivaliana*, and all the late autumn flowering



species. Where there are many, such as *Miltonia vexillaria*, *Masdevallias*, or any of the *Oncidiums* with long branching panicles, coming into flower, it may be found necessary to fumigate these lightly for a couple of evenings in succession in case of thrips, green-fly, or other insects being numerous. They should be arranged in one house, as many as practicable, and must be shaded early the following morning if bright, and if time can be found to do so, carefully sponged after the last fumigation. The state of growth must be the guide to watering, *Pleiones* or *Calanthes* newly potted requiring very little. *Cymbidiums* in flower or growing freely need abundance, and as the spikes appear in *Odontoglossum citrosmum*, the plants be well soaked in a pail or tank to moisten every part of the compost, thus plumping up the wasted-looking pseudo-bulbs and enabling them to produce good healthy spikes. As the atmospheric moisture is increased, greater care will be necessary in keeping the flowers, those of *Cattleya Skinneri*, *C. Mendeli*, and others being easily spotted. If there is no flowering house, all plants in blossom should be grouped in prominent positions in the respective houses and less water sprinkled upon the stages, floors, &c., near them. A little more shade is also a great advantage.

I have never had so little trouble with woodlice and small snails in the houses as during this spring, and this I attribute to the introduction of a few French frogs. They are frequently to be seen at night, more especially in and about the plants, where, owing to their greater size and weight, our English toads—useful as they are—could not get. Continue to maintain a sweet atmosphere in the houses by frequent cleaning of the pots, stages and floors, removing all decayed leaves, spent pseudo-bulbs or anything that tends to make the plants look untidy. Any *Cattleyas* or similar Orchids not repotted should, if necessary, be freshly tied up and new stakes given where required. A minimum temperature for the East India house will now be 60° at night, running up to 70° on dull days, 75° to 80° by sun heat. For the *Cattleyas* 55° at night is ample, 65° by day, allowing the temperature to rise gradually and ventilating freely on hot days. The cool house may range between 50° and 60° according to the outside temperature, not exceeding the latter figure excepting on very hot days. H. R.

**Cypripedium Zeus.**—This very pretty and distinct hybrid is now flowering in the collection of Mr. R. J. Measures at Cambridge Lodge, Camberwell. It is a cross between *C. callosum* and *C. ciliolare*. The flower is of fine proportions and prettily marked, the dorsal sepal large, white, veined in the centre with pale green and on each side with rose: the petals broad and gracefully drooping, spotted with blackish spots, and densely dotted at the base. The pouch resembles very much in shape that of *C. Curtisi*, but is not quite so deep in colour. The bloom is borne well up upon a long stem, which rises from nice clearly tessellated foliage.—W.

**Dendrobium Brymerianum.**—This fine species is deservedly popular and a favourite wherever grown. The beautifully fringed lip has a very striking and unusual appearance, and the bright golden colour is most attractive. *D. Brymerianum* is a medium grower, and has somewhat fusiform stems about 15 inches high, bearing upon the upper portions persistent green leaves. The roots are large and rather fleshy in texture, and the compost should for this reason be used in a rough and open condition, good lumps of charcoal being freely intermixed with the *Sphagnum* and peat. It should be grown in a hot moist house, and during this season must be plentifully supplied with water at the root. After the growth is

finished I find it rests better if kept rather drier than the evergreen section generally, but not sufficiently so to distress the plants. A minimum temperature of 50° is low enough for it during the winter, but 5° less will do no harm provided it is not accompanied by much atmospheric moisture. It usually blooms upon the two-year-old growths, and if well ripened in autumn the flowers are fairly plentifully produced in short racemes of about 3 inches each, chiefly towards the top of the pseudo-bulbs. Young plants raised from the growths that are often produced from the tops grow freely, and soon make flowering plants, as soon in fact as they attain a height of about 6 inches. A small growing variety of this Orchid sometimes appears among importations, but is quite worthless as a flowering plant, and only to be tolerated as a botanical curiosity on account of the flowers being self-fertilising, a fact proved by their fading and the ovary swelling before they are properly open. The type was introduced from Burmah in 1874, and named in compliment to Mr. W. Brymer, of Dorchester.—H. R.

**Dendrobium Wardianum** (Broome's variety).—A flower of this magnificent variety comes from Mr. Broome, of Llandudno. It is very large, of good form, and richly coloured. The sepals are bright rosy magenta on the outer surface, which distinctly shows through on the inner side, each having a distinct clear white margin, heavily tipped with crimson-magenta; the petals are broader than the sepals, pure white, and also tipped with crimson-magenta, whilst the fine large lip is recurved at the apex, and also has a large blotch of the crimson-magenta colour—a clear white zone running between that and the bright orange-yellow throat, the two dark maroon eye-like spots at the base being very prominent. This is certainly a grand variety, and is said to be more after the typical form, but more highly coloured.—W.

#### CATCLEYA ACLANDIE.

UNFORTUNATELY, this lovely little Orchid is not frequently seen in good condition, and although a little more difficult to grow than the larger habited species, it will, in skilful hands, be usually satisfactory. A frequent cause of failure with this kind is allowing the flowers to remain upon the plants too long, thus wasting their energies; and when, as often happens, the plants bloom twice in the year the evil is intensified. From a week to ten days is quite long enough to leave the flowers on the plants, and if then cut and placed in water they last fully as long. Many cultivators prefer the block system for *C. Aclandie*, and there is much to be said in its favour, as nothing can possibly surfeit the roots or cause them to decay prematurely. The plants must, however, have the best attention under this treatment and never be allowed to suffer from want of water, or they quickly become shrivelled and weakened. This is, perhaps, even more to be guarded against in winter than during the growing season, as the atmosphere is so much drier. I was reminded of this recently by a plant in a small collection in the neighbourhood. This had evidently been imported about two years and had made good progress on the block, the roots running from end to end of it showing how they had enjoyed the atmosphere provided for them while growing. The pseudo-bulbs were, however, in a sad state, being shrivelled almost to the vanishing point, and this entirely owing to the want of water, as the plant had flowered but once and the blossoms had not been allowed to remain on very long. With cultivation of this careless order the plant would have been much safer in a small basket or pan with peat and *Sphagnum*, but if a little thought had been exercised, it would have been different. The pseudo-bulbs need only have been kept plump by due attention to watering, and there would then have been strong, healthy buds pushing, instead of weak, flowerless, and puny growths. Thus it will be seen that it is not so much the receptacle in which the plants are grown as the treatment they receive that is essential to success. The

species in question delights in a warm, moist atmosphere and a light position while growing, more especially at the latter end of the season. If grown in pots or baskets, these, as indicated above, should be small, as it dislikes a large body of compost about its roots. It is a small-growing kind, not usually more than 5 inches high, the pseudo-bulbs slender, and bearing a pair of oval, deep green leaves. When compared with the size of the plant, the flowers are very large, frequently from 3½ inches to 4 inches across; the colour varies from dull green to brown on the sepals and petals, which are spotted and streaked with yellow and purple. The lip also varies in colour, is spreading in front, narrower at the base, and, unlike the majority of the genus, does not fold over the column. *C. Aclandie* is a native of Brazil, whence it was introduced in 1839. It usually flowers in June, but, as mentioned above, it sometimes produces a second lot of flowering growths.

R.

#### SMALL-GROWING VANDAS.

The genus *Vanda* includes some of the finest and most stately Orchids ever introduced, having not only remarkably beautiful flowers, but handsome evergreen leaves, and therefore very ornamental throughout the whole year. Being plants which come from a very hot quarter of the globe, they naturally require strong heat under cultivation, and this, with the large dimensions that some of the kinds attain, do not admit of their being generally grown. There are, however, some of very dwarf habit which should find a place in every collection. During recent years some beautiful additions have been made to these small growing kinds which succeed admirably in quite a cool temperature. For these dwarf *Vandas* baskets are preferable to either pots or cylinders, as it is very essential that they should have all the light possible; in fact, they require only to be shaded when the sun is very powerful and the foliage is in danger of being scorched. The baskets should be suspended close to the roof and about two-thirds filled with drainage, the remaining portion being living *Sphagnum Moss*, which should be renewed annually, or when not in a sweet condition. During the summer and growing season water should be freely supplied and the atmosphere kept well charged with moisture, at which season the temperature may rise to 80°, but during the winter much less moisture, both at the roots and in the atmosphere, will be required, the thermometer not being allowed to descend lower than about 55° or 60°, excepting for *V. Amesiana* and *V. Kimballiana*. These two kinds I have grown in quite a cool temperature, and they flower much better than when placed in heat. It was in 1819 that the first *Vanda* flowered in this country in the collection of Sir Joseph Banks. This was *V. Roxburghi*, upon which the genus was founded by Robert Brown.

**V. ROXBURGHII.**—This plant grows about 18 inches to 2 feet high, the stem being furnished with broad, curved, leathery leaves, each about 6 inches in length. The flowers, which are produced during the summer months, are borne upon ascending racemes, which usually carry from six to nine blossoms. The sepals and petals are pale green, with chequered lines of olive-brown, the outer surfaces being clear white; the lip deep violet-blue with small white side lobes. Among some of the plants sent home a variety which has the lip of a bright rosy red has appeared. This species is very plentiful in Bengal and other parts of India.

**V. CERULEA.**—A very valuable addition to this family, as the blooms are of the rare blue which is so seldom found in plants. This plant cannot compare with the large-growing blue kind (*V. cerulea*), but it is, nevertheless, an equally

desirable plant. It produces strap-shaped leaves upon an elongated stem, and usually flowers during the early summer months, the erect slender scape usually carrying over a dozen of these charming blossoms. The sepals and petals are of a pale mauve-blue, whilst the lip is rich violet. This little gem was first discovered in Upper Burmah in 1837, but was not introduced for thirty years later, when it was sent home from the Arracan Mountains, where it grows at considerably over 1000 feet elevation. There are several fine varieties of this plant.

**V. AMESIANA.**—This is also a native of Upper Burmah, and has only been introduced about six or seven years. It was first discovered by Mr. Boxall in the Shan States, where it grows upon the mountains at an altitude where hoar frosts appear during the resting season. The plant is of a stiff dwarf habit, the leaves, which are upwards of a foot in length, tapering to a point. The flowers are borne in large quantities upon erect stems, and have white sepals and petals flushed with delicate rose, whilst the lip is of a rich magenta. There is also a white variety, both of which are very desirable, as the flowers appear in the winter months.

**V. BENSONI.**—This is another small-growing kind which has been grown in our gardens for many years, and forms a pleasing companion to *V. cerulescens* and its varieties alluded to above. The sepals and petals are yellowish and reticulated with bright brown, and the lip is of a light rosy purple. It first flowered with Messrs. Veitch and Sons, of Chelsea, over twenty years ago, and as it is found in the warmest parts of Burmah a little warmer temperature will suit it best under cultivation.

**V. DENISONIANA.**—This is an exceedingly pretty little kind, which was discovered by Col. Benson growing on the Arracan Mountains at an elevation of over 2000 feet. The leaves are each from 6 inches to a foot in length, and the raceme is usually shorter than the foliage and few-flowered. These, however, are upwards of 3 inches in diameter, and very distinct from those of all other kinds, being of clear ivory white in the sepals and petals, the lip even purer white. A very charming variety of this beautiful *Vanda* appeared amongst an importation of Messrs. B. S. Williams, of Holloway, about ten years ago, and which was named *V. Denisoniana hebraica*, in which the sepals and petals are sulphur-yellow with transverse bars and spotted. This, however, appears to be a very rare plant.

**V. KIMBALLIANA.**—Another recent addition found by Mr. Boxall at the same time as *V. Amesiana*, and introduced by Messrs. Low and Co., of Clapton. It is one of the most beautiful of all the small growing kinds, and, like its companion, is especially adapted for amateurs who have not the convenience and strong heat necessary for many of the larger species. It is of very dwarf habit with narrow leaves, and produces a spike of from six to a dozen blooms, which are individually nearly 2 inches across. The sepals and petals are pure white, the latter prettily twisted, and the lip of a rich clear bright purple.

There are also a few other kinds which might be included in this list, but these alone would form a very lovely collection.

WM. HUGH GOWER.

**Dendrobium japonicum.**—This is a pretty little plant that one seldom meets with, and although it is not one of the most showy species in this family, it is decidedly worthy of attention and a welcome addition to our coolhouse kinds. The stems, which grow from 6 inches to 1 foot in length, are slender and deciduous; the flowers are each about  $1\frac{1}{2}$  inches in diameter, the sepals and petals white when first open, becoming flushed with age; the lip is recurved, also white, with a few purplish dots at the base. This plant has been in cultivation for about thirty-five years, having been sent from Japan to the Royal Gardens, Kew. It was, however, known many years previously, for we

find it described by Dr. Lindley in his "Genera and Species of Orchidaceous Plants" in 1831. A very pretty specimen of this dwarf-growing plant is now flowering with Messrs. J. Laing and Sons at Forest Hill.—W.

## TREES AND SHRUBS.

### SPIRÆA LINDLEYANA.

THERE is a small group of shrubby *Spiræas* remarkable for their pinnate leaves, and of these by far the best known as well as the largest is that here illustrated—*S. Lindleyana*—which will reach a height of from 12 feet to 15 feet, and even higher. It pushes up suckers freely, so that when occupying an isolated position it usually forms a broad pyramidal mass or clump well furnished with its beautiful pinnate leaves. From this circumstance it forms a really handsome object out of flower, but when laden with its large branching panicles of white flowers, as herein shown, its beauty is, of course,



*Spiræa Lindleyana.* Engraved for THE GARDEN from a photograph sent by Miss Bird, Esher.

greatly enhanced. This *Spiræa* is specially valuable from the fact that it is the last of the genus to unfold its blossoms, though some of the others may produce secondary blooms even after this is past. *S. Lindleyana* is, as a rule, at its best in August, though in some years it may commence to flower in July, and I have also noted it in good condition in September. Should the winter be mild the leaves are retained for long time. Though this *Spiræa* is seen at its best when standing singly, yet where associated with other shrubs and ample space allowed for its development, it forms a very imposing feature. Another pinnate-leaved species is the Siberian *S. sorbifolia*, which usually reaches a height of about 4 feet to 5 feet. It blooms earlier than *S. Lindleyana*, and is wanting in the grace and elegance of that species. In his monograph of the *Spiræas* M. Maximowicz places the pinnate-leaved species by themselves under the generic name of *Sorbaria*. T.

**Bambusa Metake and the frost.**—It is pleasing to find how well this Bamboo has stood the late wintry weather. We have here large clumps of it growing freely by the side of a small

lake. These do not exhibit the slightest sign of having passed through 28° of frost. Fortunately, the clumps in question were not exposed to keen, cutting winds, which are more injurious to Bamboos than severe frost. It would be difficult to find a more pleasing and suitable subject for waterside planting than this Bamboo, which grows luxuriantly in any ordinary garden soil.—E. M.

**Robinia hispida.**—The French journal *Le Jardin* for March 5 contains a most interesting article on "Shrubs for Forcing," and quotes a long list of flowering shrubs that were exhibited by Messrs. Moser, of Versailles, at the Concours Général Agricole de Paris, held in the month of February. Among those that are rarely seen so treated in this country occurs the name of *Robinia hispida*, which would be certainly very distinct from any of its associates. The only other leguminous plant whose name appears in the list in question is *Wistaria sinensis*, or *Glycine sinensis*, as our French neighbours often prefer to call it. According to Messrs. Moser, both the *Robinia* and the *Wistaria* give better results if they are grown in pots a year before they are forced than they do if lifted in the autumn, potted and taken under cover for forcing in the coming spring.

The Laburnum also generally does best if subjected to the same kind of treatment. The bulk of the exhibit consisted of Azaleas, Rhododendrons, Lilacs and Magnolias, as well as *Staphylea colchica*, *Andromeda japonica* and the pretty little *Erica carnea* or herbacea and its white variety. Messrs. Moser also contribute a list of subjects suitable for forcing other than those exhibited by them, but all those mentioned are used in this country for the same purpose, the most uncommon of the whole being *Xanthoceras sorbifolia*, whose spikes of white blossoms with their peculiar coppery blotch are very distinct from anything else.—H. P.

**Evergreen Euonymus.**—One of the most generally grown shrubs of an evergreen character that we have in our gardens is the Japanese *Euonymus*, of which immense numbers are sold every year by our nurserymen. Several causes combine to render it popular, as in the first place it can be easily and quickly propagated by means of cuttings; next, the young plants grow freely, and with a little attention it forms a neat bush, while owing to the dense mass of roots it can be lifted at almost any season of the year with little or no injury. Added to all this is the fact that it is a first-rate subject for planting in proximity to the sea, and one of the best Evergreens we have for towns and smoky districts. Just now in many

places, owing to the frost, its claim to be regarded as an Evergreen does not rank high, as most of the leaves are quite dead, while the shoots are killed back for some distance. The destruction is by no means uniform, as some plants have suffered much more than others, even when separated by but a few yards. This *Euonymus*, however, quickly recovers, so that plants which just now present a sorry spectacle will in many cases within a few months show little or no trace of the ordeal through which they have passed. As might be supposed, the variegated-leaved varieties have in most instances suffered a good deal more than the ordinary green-leaved form, while the little neat-growing variety *microphyllus* has been hard hit. The close habit of this, combined with its deep green foliage, renders it a very popular Evergreen for window boxes and similar purposes during mild winters, but an occasional severe one like this has been will kill great numbers of it, and very few will be seen for a year or two. The rambling growing *Euonymus radicans* with its variegated-leaved variety has not suffered nearly so much as its larger relative, for in the case of *E. radicans* there is in most instances but little damage done, and, except some browned leaves, the plants bear but little traces of the winter they have just passed through. A distinct variety of *E. radicans* known as *Carrieri* seems to be even less injured than the type.—T.

**Cunninghamia sinensis.**—This, better known perhaps as *Cunninghamia lanceolata*, is an exotic that has utterly failed to justify the expectations formed as to the position it was likely to occupy in English gardens, as some little time after its introduction in 1804 it was planted rather freely in many places that had the reputation in those days of attempting to naturalise novelties. When I took charge of the gardens here, some thirteen years ago, I found four specimens of this *Cunninghamia* in various parts of the pleasure grounds. Two of these were in such indifferent health, dead branches decidedly predominating, that their removal was at once effected, another was slightly better, but a *Deodar Cedar* had been planted too close, and a branch of the latter tree coming away rather more horizontally than usual had hopelessly crippled and disfigured the leader of the *Cunninghamia*; the remaining tree was and is a very fair specimen of its class. This for some years had not had very good treatment, a lot of big *ponticum Rhododendrons* being allowed to grow into it on two sides. These were cut hard away, and the tree is now fairly well furnished on all sides and is nearly 25 feet high. A drawback to the tree is the brown decaying appearance of the foliage, a result apparently the work of winter frosts. Cutting winds have a similar effect on the foliage, and the planter of the tree was evidently aware of this fact, for it is in a very sheltered spot. I have been led to furnish the foregoing particulars from the fact that inquiries are often made respecting this tree and the advice sometimes given to give it a place in the flower garden or pleasure ground, but from my experience with it here I cannot agree with this. I should never find room for another *Cunninghamia*. It is a pity that it is not satisfactory, as appearances would seem to indicate that, given a suitable climate, it would make a very handsome tree; the foliage not affected by the weather is of a bright pleasing green, and the general habit tends towards building up a well furnished specimen, at the same time lacking the excessive stiffness and formality that are characteristic of many of the coniferae.—E. BURRELL, *Claremont*.

**Death of Evergreens.**—It is sad to walk just now through some of our small towns and see all the little gardens in mourning owing to dead Evergreens. It shows well the thoughtless waste that goes on in continually planting in our country Evergreens which are quite unable to support hard weather away from sheltered places near the sea shore. The fact that they escape in mild winters makes them all the more ready for the frost when it does come. Some of our Evergreens that are common, like the Laurel and the Portugal

Laurel, grow so rapidly, are so easily raised in nurseries, and look so glossy, everybody plants them, but in any thoughtful way of planting, things that are periodically killed should not be planted. There are several things which are so hardy as not to perish in such cases, such as the Yew, Holly, several of the Pines besides the Scotch Pine, and Box, which is very beautiful when well grown. It is also a great mistake not to trust more to summer leafing trees, which are mostly much hardier than the Evergreens. Between the conifers and the common Evergreens there has hardly been a place left in gardens for the many beautiful things of Europe and America which are quite hardy, and which go to rest in winter as our Oaks and Birches do. In any case a fine live Cocks-pur Thorn is better than a dead Evergreen, and we are not sorry for the deaths of the millions of Evergreens so thoughtlessly planted. They cast a gloom and a monotony over pleasure grounds, which is death to the variety and beauty that are so easily attained if we do not give ourselves over to the nursery mixture of things with little merit save that of rapid growth, followed, however, in hard winters by a still more rapid death.—*Fidd.*

THE BEST OF THE PINE TRIBE.

A FEW tree-loving friends lately talked after dinner about the large number of useless conifers, such as the Wellingtonia, Araucaria and many other half-hardy things, which, however good in their own countries, are poor and useless in ours. After deploring the great waste of money and good ground caused by planting some of these trees and the resulting ugliness, we endeavoured to elicit opinions as to which among the many conifers introduced to this country were really worth planting. There were only about twenty thought good enough, from a woodland point of view, to be exempted from the general condemnation passed upon conifers. We enumerate them:—

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|---|---|
| 1. Silver Fir ( <i>Abies pectinata</i> )              | 11. <i>Thuopsis borealis</i>                        |
| 2. Corsican Pine ( <i>Pinus Laricio</i> )             | 12. <i>Cupressus Lawsoniana</i>                     |
| 3. Cedar of Lebanon ( <i>Cedrus Libani</i> )          | 13. <i>Taxodium distichum</i>                       |
| 4. White Pine ( <i>Pinus Strobus</i> )                | 14. The Pineaster ( <i>Pinus Pinaster</i> )         |
| 5. Swiss Pine ( <i>Pinus Combra</i> )                 | 15. Colorado Douglas Fir ( <i>Abies Douglasii</i> ) |
| 6. Larch  | 16. <i>Abies nobilis</i>                            |
| 7. Black Spruce ( <i>Picea nigra</i> )                | 17. Nordmann's Fir ( <i>Abies Nordmanniana</i> )    |
| 8. Austrian Pine                                      | 18. The Bhotan Pine ( <i>Pinus excelsa</i> )        |
| 9. The Rocky Mountain Spruce ( <i>Picea pungens</i> ) | 19. <i>Abies brachyphylla</i>                       |
| 10. <i>Picea concolor</i>                             | 20. <i>Pinus monticola</i>                          |
|   | 21. <i>Tsuga Mertensiana</i>                        |
|   | 22. <i>Thuja Lobbi</i>                              |
|   | 23. <i>Picea orientalis</i>                         |

A great many of the introduced Pine and Fir tribe do well in some parts and not in others. Some do best north, some south, some in valleys, some on hills, some on one soil and some on another. We omit the common Spruce, as it is such a miserable failure in many soils.

THE FORESTS OF THE WABASH VALLEY.

THE composition of the remarkable forests which, in spite of the terrible inroads that have been made in them during the last twenty-five years, still cover considerable portions of the region in Southern Illinois and Indiana watered by the Wabash River and its tributaries was first made known by a paper published in 1882 in the fifth volume of the "Proceedings of the United States National Museum" by Dr. Robert Ridgway, the ornithologist of the Smithsonian Institution.

Dr. Ridgway was born in Mount Carmel, on the banks of the Wabash River, nearly opposite the mouth of White River, and his early work brought him into familiar

intercourse with the trees of that region. By a piece of good fortune his investigations have, moreover, been supplemented by those of another naturalist—Dr. Jacob Schneck—who for many years has lived in Mount Carmel and has also been specially interested in trees. The result of this fortunate association has been that the forests in the neighbourhood of the mouth of White River have been more carefully studied than those in any other spot of equal interest west of the Alleghany Mountains.

In a second paper on the Wabash Silva, recently published in the seventeenth volume of the "Proceedings of the National Museum," Professor Ridgway shows that the number of indigenous arborescent species in the Wabash valley south of the mouth of White River is 107, or more than a quarter of all the arborescent species in North America north of Mexico; and even this number can be slightly increased, as one or two species of *Crataegus*, overlooked by Professor Ridgway, grow near Mount Carmel. Some idea of the surprising richness of the forest flora in this region can be obtained by an examination of Dr. Ridgway's list of trees growing on restricted areas. On a tract of 75 acres he found fifty-four species of trees, and another of 22 acres contained forty-three species. On a tract of 40 acres one mile south-east of Olney, in Richland County, Illinois, what the author modestly calls an imperfect survey of the woods shows thirty-six species. The nearest approach to such a concentration of tree species in a restricted area is in Central Yezo, where Professor Sargent found sixty-two species and varieties of trees growing in the immediate neighbourhood of Sapporo at practically one level above the sea. The height attained by these Wabash valley trees is as remarkable as the number of species in the forest. Individuals of forty-two species reach a height of 100 feet, and those of twenty-one species grow to the height of 130 feet. Individuals 150 feet high of thirteen of these species have been measured. A specimen of *Quercus texana*, called *Quercus coccinea* by Dr. Ridgway, the tallest of the Wabash Oaks, and perhaps the tallest Oak in North America, measured 180 feet and a Tulip tree 190 feet; a Pecan, the tallest Hickory, 175 feet; a Cottonwood (*Populus monilifera*), 170 feet; a Bur Oak (*Quercus macrocarpa*), 165 feet; while, in addition to the trees already mentioned, a Liquidambar and a Black Oak attained a height of 160 feet. The size of the trunks of some of these trees, measured at 3 feet above the surface of the ground, is hardly less remarkable than their height. A Sycamore (*Platanus occidentalis*) girthed 33½ feet, a Tulip tree 25 feet, a White Oak 22 feet, a Black Walnut 22 feet, a Black Oak 20 feet, and a Texas Oak 20 feet. In comparison with such trees, the inhabitants of Eastern forests, where trees 100 feet tall are extremely rare, appear like pigmies, and persons familiar only with forests of the Atlantic seaboard can form no idea of the magnificence of these trees.

This region is the home of some of our most beautiful and valuable trees. On the bottom-lands of the rivers the Pecan and the great western Hickory (*Hicoria laciniosa*) grow with all the Swamp White Oaks, the Pin Oak, the Texas Oak, and that remarkable form of the Spanish Oak, which, usually an upland tree, sends up on these bottom-lands a tall, beautiful shaft covered with pale bark, which might readily be mistaken for the trunk of one of the White Oaks. The attention is first called to this variety in Professor Ridgway's second paper, although it has long been known to southern lumbermen. Common in the Yazoo delta and in Eastern Arkansas, and not rare in

Northern Alabama and Western Florida, it is valued as a timber tree, and is said to produce wood equal to that of the White Oak. In the Wabash valley the southern Cypress (*Taxodium*), the Water Hickory, the Water Loenst, and the Planer Tree, all denizens of the south, find their northern homes, and there the rare Swamp Cottonwood grows to its largest size, and the Catalpa displays its greatest beauty. In these lowland forests great lianes festoon the trees, and Dr. Ridgway tells us of Grape Vines with stems more than 100 feet long and more than a foot in diameter, and of *Aristolochias*, Poison Ivies, and *Bignonias* nearly as large. No other American forest scene is more beautiful, and certainly no other forest of deciduous trees, for it must be remembered that in all this great collection of trees there is not a single species with evergreen leaves, is more interesting.—*Garden and Forest*.

## STOVE AND GREENHOUSE.

### THE CAPE PRIMROSES.

(STREPTOCARPI.)

THESE *Gesnera*-like plants are of quite recent introduction if we except *S. biflorus*, this having been raised a dozen years or so back. Presumably, *S. biflorus*, the parentage of which does not appear to be fully recorded, has had considerable influence in these later hybrids, which originated at Kew, and which hybrids have been taken in hand by Messrs. Veitch and Sons at Chelsea, the result being a still further advancement in the diversity of colours, as well as in the flowering of the plants themselves. Some ten years or so back I was struck with the utility of *S. biflorus* as a small decorative pot plant, and I took it in hand for that purpose with very satisfactory results. The style of its flowering is denoted in its name. This has been greatly improved upon, however, in the present-day hybrids as raised and grown at Chelsea; so much, in fact, as to make the plants extremely effective for months together, the same spike producing many flowers, whilst the production of spikes is more continuous also.

Many growers have taken the cultivation of these beautiful plants in hand with varied results. Where a partial failure has occurred it is in nearly every instance to be attributed to growing the plants in too much heat and moisture. This they do not require, nor will it be found so satisfactory when attempted. True, it is desirable, and, in fact, essential, to raise seedlings in warmth the same as one would *Gloxinias*; but as soon as these seedlings are once well established then the treatment should be on different lines. Compared with *Gesneras* and *Gloxinias*—to which the *Streptocarpus* is closely allied—less heat and moisture too are necessary, otherwise the constitution of the plants will be greatly impaired. Less shading, also, when once established will be productive of better results. The best plants I have seen were being grown in a mixed collection of flowering subjects in a cool greenhouse, the other occupants being tuberous *Begonias*, small *Geraniums*, *Petunias*, &c., during the month of July in the north of England. Another good lot of plants were finding a congenial sphere in a Peach house, the fruit from which had all been gathered, this fact denoting the treatment then accorded to such a house. In order to have the plants in flower early—say during April and May—a slight amount of warmth must be given, as in the case of the tuberous *Begonia*; but in doing this endeavour to select a posi-

tion with a fair amount of ventilation and near to the glass also, with no shade from other plants. These beautiful plants have given good results as window subjects, lasting in such positions a long time in flower. One other important fact to be borne in mind is that of not keeping the plants absolutely dry at the roots during the winter; this, too, will conduce to failure, being very weakening to the growth, for it must be borne in mind that although a somewhat fleshy stem is produced beneath the soil, it cannot be designated a tuber or bulb, hence it will not withstand drought in the same measure. There is a use to which these hybrid *Streptocarpi* may be turned, but of which not sufficient advantage has thus far been taken. It is that of planting out well-established plants as marginal lines to cool conservatory borders. At Kew they are grown thus with very marked success in the succulent house, but a cooler house would answer quite as well provided there be no great amount of shade. No large

in the colours to what there was only a few years back, the range of colour being greater, whilst in the markings there is a decided advance. In point of size also the same improvement is apparent. The accompanying illustration from a photograph shows the freedom of flowering now characterising these hybrids; the purity of colour in this instance is also very clear. *Streptocarpus Wendlandi* is an imported species of very remarkable growth, with an erect flower-spike bearing a number of flowers. Allusion is made to this species, as it is the most recent one to which a first-class certificate was awarded. It is totally distinct from the preceding hybrids. SOUTHRON.

**Lachenalias in baskets.**—For years I have grown *Lachenalia tricolor* in baskets with excellent results. I consider that in no other way do *Lachenalias* give such interesting results. Our plants from the time they commence to grow are suspended from the rafters of a three-quarter



*Streptocarpus hybrids.* Engraved for THE GARDEN from a photograph of plants growing in the garden of Mr. E. H. Lushington, Brockenhurst, Cobham.

quantity of soil is needed for this purpose, nor should it be of too rich a character, a more important feature being to keep it firm around the plants.

Where no stock at present exists, seed if sown at once will yield plants that will flower next autumn in small pots; these another season will be large enough for all practical purposes, for nothing beyond a 6-inch or 7-inch pot at the most is needed for this dwarf section. The seed germinates somewhat slowly compared with those of *Gloxinias*, but in abundance. The seedlings should be pricked off into pans as soon as they can be conveniently handled in a light and sandy soil. Later on this can again be done into shallow boxes, so as to save room. Another capital plan is to plant out in cold pits towards the end of May near the glass with a slight bottom-heat to encourage growth at first; in this way quite large plants can be had by the autumn, when potting up should be performed rather than storing in other ways. There is now a vast improvement

span-roofed Peach house, where the constantly opened ventilators afford abundance of air. By inserting the bulbs rather thickly the wires of the baskets are not visible, as in the photograph, p. 163. Ordinary Moss I always use. The bulbs are placed a few inches apart, the point of each being just within the Moss. As "W." says, it is not necessary to disturb the bulbs every year; liquid manure will suffice to promote a vigorous growth.—E. M.

**Stephanotis floribunda.**—When on a visit recently to the nurseries of Messrs. Fisher, Son and Sibray, Handsworth, Sheffield, I noticed a very fine plant of the above climber. The house it was growing in was comparatively cool, being used for growing *Azaleas*, greenhouse *Rhododendrons*, and plants of a like description. It was planted out, and covered a roof space of 500 square feet at the least. The plant looked very healthy, and a much greater space could have been covered if it had been available. I was informed large quantities of wood are cut out every year in order to keep the plant sufficiently thin. One great advantage in growing this plant cool is that mealy bug is not so troublesome as when

grown in strong heat. The latter pest does not trouble the Handsworth specimen, but it requires sponging now and then to remove the sooty deposit that finds its way into the house. The plant blooms well every year, being at its best in August. Perhaps some of your readers would kindly inform me of the space covered by the largest known specimen *Stephanotis floribunda*.—C. R.

## SOCIETIES AND EXHIBITIONS.

### ROYAL HORTICULTURAL SOCIETY.

MARCH 26.

THE improvement so manifest at the earlier meeting in the month was on this occasion further enhanced as regards the number and variety of the exhibits as well as in the attendance of Fellows. Orchids had again by far the greater monopoly in point of numbers and rarity, *Dendrobiums* more particularly being in the ascendant. Most notable amongst this genus was the prince of the *D. nobile* type, viz., *D. nobile nobiliss*, of which a grand plant was exhibited in profuse flower, the finest example by far that has yet been seen of this grand form. Other *Dendrobes*, chiefly hybrids, were shown in profusion, nearly every one of which bore evidence of affinity to *D. nobile*. Some wonderful forms of *Odontoglossums* came from The Dell collection, being superb varieties and most notable examples of good culture. The chief point of attraction, perhaps, from the point of rarity and singular structure was to be found in *Bulbophyllum burfordense*, a decided botanical acquisition. Some fine forms of *Cattleya Trianae* were shown; so also were others of *C. speciosissima*. *Vandas* also made their appearance from Holloway, and quite a unique plant was to be seen in *Bollea Schrederiana*, from St. Albans, the Orchid committee signifying their approval by a first-class certificate, the only one awarded on this occasion.

At this meeting in March, Hyacinths, Tulips, and Narcissi are nearly always a leading feature, it being just the right season for Hyacinths and early Tulips, but, singular to say, trade groups of these as usually seen were entirely absent. None of the abnormal examples of the Hyacinth, as in former years, from bulbs several years of age, were shown. A mixed collection of bulbs and other spring flowers came from Syon, amongst which particular note should be made of the straw-coloured French Hyacinth, a valuable acquisition for cutting, and of sprays of *Acacia* so well grown in these gardens. As at the previous meeting, the *Amaryllids* from Chelsea were a feature, the coveted award being gained. At the present time the improvement that is most notable in these hybrids is the more rounded contour of the flowers, thus giving a better shape; a manifest improvement in depth of colour is also gaining ground. *Camellias* from Waltham Cross, *Caladiums* from Roupell Park, and *Clivias* from the well-known Holloway collection were all to be seen in good condition. Last, but not least, the early spring-flowering hardy plants (bulbous and alpine) were shown in charming variety. The fruit and vegetable committee had but little before them, the report of which exhibits will be found under that head.

#### Orchid Committee.

A first-class certificate was made to—

*BOLLEA SCHREDERIANA*, of which quite a large specimen was shown, bearing nine fine flowers of large size and wax-like substance, the sepals and petals being of a clouded white and of incurved form, but not so much so as in the *Anguloas*. The labellum showed a faint tint of purple, fading with age, the flowers averaging 4 inches across. This is a decided acquisition to its genera. From Messrs. Sander and Co.

Awards of merit were accorded to—

*ODONTOGLOSSUM LUTEO-PURPUREUM AMPLISSIMUM*.—A very robust growing form of this species, with an unusually stout bulb and sturdy erect spike bearing eleven flowers. The spots and blotches were of a dark oak colour, with a straw-coloured base and tips, the lip being broad, yellowish white, with a pale oak-coloured blotch. From Mr. Weetman, Little Heywood.

*DENDROBIUM CORDELIA* (hybrid *D. euosmum leucopterum* × *D. aureum*).—A singularly distinct and beautiful form of dwarf growth, into the blooms of which more of the golden colour of *D. aureum* has been imparted than usually obtains by such a cross. The sepals and petals are transparent, white, flushed around the edges with faint rosy pink, the lip being veined with velvety crimson on a golden ground, having a margin of creamy-white. From Messrs. J. Veitch and Sons.

*CATLEYA TRIANA* (Parkes' var.).—A very fine form of robust growth and large flowers, into the sepals and petals of which has been infused a greater depth of the pervading tint, the lip being broader and more elongated, with the lower portion of a deep crimson-purple, the upper portion having a rich shading of old gold colour. From Mr. W. C. Parkes, Llanberis Tower, Tooting.

*CYPRIPEDIUM OLEUS* (hybrid *C. bellatulum* × *C. ciliolare*). This is quite a gem amongst the dwarf forms, in this respect taking more after *C. bellatulum*, as it does also in a great measure in its form, whilst the colour of its other parent has greatly prevailed. The petals are broad, vinous purple, with dark purple spots in profusion, the dorsal sepal being of the same shade in lines, with a trace of green, and the lip of a deep bronzy-purple. From Mr. R. J. Measures' collection.

*DENDROBIUM DONNESLE*.—A very fine variety, which is best described as *D. formosum giganteum* in growth with the flowers of *D. Jamesianum*, but of larger size. The petals are very broad, these and the sepals being of the purest transparent white, the lip having the deep orange blotch. From Mr. Bradshaw, The Grange, Southgate.

*DENDROBIUM SCHNEIDERIANUM* (hybrid *D. Findlayanum* × *D. aureum*).—An Orchid which has been previously shown, but not in such good condition as on this occasion (the plant in question was raised by Mr. Holmes). It has the expanded lip so prominent in *D. Findlayanum*, the entire flower being larger also; the lip is of a deep golden tint, with crimson veins in the centre, the sepals and petals being white, with a pale purple flush. From Mr. E. Ashworth, Wilmslow, Cheshire.

*DENDROBIUM SPLENDIDISSIMUM ILLUSTRIS* (hybrid *D. Leechianum* × *D. nobile nobiliss*), which is undoubtedly one of the finest forms of *D. splendidissimum* yet seen, a deeper infusion of the purple of its last-named parent being very manifest; the flowers are of extra size, whilst the deep vinous purple blotch on the lip is larger also, it being margined with pale sulphur and tipped with light purple. The growth is very free. It is a worthy companion to Cypher's hybrid shown at the previous meeting. From Mr. W. R. Lee, Auden-shaw, Manchester.

Botanical certificates were awarded to the following Orchids:—

*BULBOPHYLLUM BURFORDENSE* (previously alluded to) has much the largest flower of its genus, being yellowish green in colour, with a number of white spots; the plant in question also received a cultural commendation. From Sir Trevor Lawrence's collection.

*BATEMANIA PERUVIANA*.—A small, dwarf-growing species, with a short, dense spike of flowers, greenish yellow, with darker markings. From Messrs. Sander and Co.

*SCHOMBURGKIA UNULATA*, labelled *S. crispa*; whereas this latter var. has a white lip, that of the plant shown having the identical colour of *S. undulata* (a clear violet-purple), the sepals and petals undulated (not curled) and of a brownish purple shade. From Sir Trevor Lawrence.

*ODONTOGLOSSUM CRINITUM SAPHIRATUM*.—A form with light-coloured flowers of small proportions, but very light and pretty. From the same source as the last.

Medals were awarded as follows:—

To Mr. E. Ashworth for the remarkable specimen of *Dendrobium nobile nobiliss*, to which allusion has been made; the plant in question bore 389 flowers, the longest growth measuring 3 feet 9 inches, showing cultural skill of the highest excellence. Taking into consideration the short time this superior form of *D. nobile* has been in cultivation, it speaks well for the vigour of the plant to have attained such a size; its mass of richly coloured flowers produced a grand effect. Award silver Banksian medal.

To Messrs. J. Veitch and Sons for a handsome and choice group consisting largely of their own hybrids, amongst which there were no less than five plants of *Cymbidium eburneo-Lowianum* in rare condition and vigour. Another fine hybrid was *Cypridium macrochilum* of the *Selenipedium* group (*C. longifolium* × *C. caudatum* Linden), the beautifully marked inner part of the lip being very noteworthy. *C. Brysa*, another distinct hybrid, showed its affinity to *C. Seleni candidulum*, but with larger flowers, flushed with pale rosy pink. Another noteworthy hybrid was *Odontoglossum excellens*, raised between *O. triumphans* and *O. Pescatorei*, thus proving, what was already surmised, that the imported *O. excellens* was a hybrid of natural origin. *Epidendrum Endresio-Wallisi* was also shown, and *Dendrobium Cybele nobiliss* (*D. nobile nobiliss* - *D. Findlayanum*), having the sepals and petals of the first-named parent, with the form of lip of the latter, a dark blotch taking the place of the golden one. *D. Murrhinianum* has the features of *D. Ainsworthi* in a great measure, not showing much of *D. Wardianum*, one of its parents. Of other species there was a fine form of *Cymbidium Lowianum*, with extra dark crimson on the lip; *Odontoglossum crispum*, a handsome and beautiful form, the broad sepals and petals being entirely suffused with rosy purple, the golden colour of the lip deeper than usual; *Celoglyne crispa hololeuca* (alba), a good plant with ten spikes of bloom; *Cypridium Druryi*, with its golden flowers and dark lines on the sepals and petals; *Miltonia cuneata*, an uncommon species with a creamy white lip and the sepals and petals of a dark bronzy tint with traces of pale gold; *Oncidium superbiens*, a distinct species of the *O. macranthum* type; *Odontoglossum triumphans*, with two good spikes, and *O. Wilckenum*, a well-marked form; also *Dendrobium atroviolaceum* (awarded silver Flora medal).

Messrs. Sander and Co. sent a very choice assortment, amongst which there was a profusion of *Dendrobes*, chiefly hybrids of the best quality. *D. Owenianum*, a fine hybrid, showing some of the features of *D. melanodiscus*; *D. Ainsworthi*, a large and very superior form, with pure white sepals and petals; *D. nobile Cooksoni*, so very distinct, with the dark purple of the lip imparted also to the petals; *D. Findlayanum*, a fine mass in profuse flower, the well-expanded lip showing to good effect; *D. nobile Amesiae*, with clear, transparent white sepals and petals, the lip a trifle small in comparison, but richly marked; and *D. nobile Sanderi*, conspicuous by the absence of the dark blotch on the lip. Other good forms of *D. nobile* were also shown here. *Eulophelia Elizabethae* was also staged, as well as *Lycaste Skinneri*, of which there were several richly coloured varieties; *Pescatorea Lehmanni*, of a deeper colour than usual; and *Angreum Sanderianum*, always attractive with its charming spikes of white blossoms. *Cattleya Trianae alba* was shown in a cut state; also *C. Schrederiana alba*, the latter having the golden markings on the lip of a darker shade. *Lycaste Lawrenceana*, a somewhat uncommon species, was also shown here, and last, but decidedly not least, there was a very fine form of *Cypridium Lawrenceanum* *Hyeatum*, the plant having one large bloom; the species is clearly to be seen in the contour of the

flower, but all the purple has vanished, leaving given place to the purest white and dark green veins in the dorsal sepal, a lighter shade of green, nearly self-coloured, in the petals and in the pouch also, which is of a lighter shade still. Award silver Flora medal.

Messrs. B. S. Williams and Son sent a good group in which there were several capital plants of *Vanda snavis* and *V. tricolor*, the latter in variety, each plant bearing on the average two spikes. A fine specimen of *Cymbidium eburneum* was included with some twenty-four flowers; *Calanthe Sanderiana*, several plants in fresh condition; a good example of *Cypripedium Morganii* bearing several blooms; *C. Ashburtonia-expansum*, a fine form of one of the earlier hybrids; and *C. Masterianum*, a distinct variety; also *Angraecum Sanderianum* (syn., *A. modestum*), as well as *Dendrobium nobile Wallichianum*, *D. Lecchianum*, and several very healthy plants of *C. Chamberlainianum* with well marked flowers. Award silver Banksian medal.

From Messrs. H. Low and Co. came a very pleasing group, amongst which were several plants of *Odontoglossum (Miltonia) Rozeli* and its white variety in the healthiest possible condition with a great profusion of flowers of large size; a better lot of plants could not be desired. Other good things comprised *Cypripedium Curtii*, dark in colour; also *C. ciliolare*, *Cattleya Trianae*, *Odontoglossum triumphans*, richly marked; *O. Edwardsi*, *Oncidium luridum* and *O. Papilio*, as well as *Dendrobium Barberianum*. Award silver Banksian medal.

Messrs. Lewis and Co. had a small group comprising *Cattleya Trianae* in good vars., *Ada aurantiaca*, *Cymbidium Lowianum* and *Cypripedium cilo-villosum*, a distinct hybrid, with *Dendrobium cupillipes*, a charming dwarf species with rich golden-yellow flowers in two shades, and *D. primulinum*, one not often seen now (silver Banksian medal). Mr. James Cypher, Cheltenham, sent a splendidly grown lot of plants of *Dendrobiums*, comprising *D. crassinode* with bulb-wreathed in flowers, one plant bearing flowers of deeper colour than usual; *D. nobile pendulum*, a good old species in fine condition and full of bloom; *D. nobile pulcherrimum*, with long sepals and petals, slightly tipped with pale purple, the blotch on the lip of a deep maroon shade; *D. Ainsworthii*, a capital example; *D. nobile nobiliss.*, a sturdy plant, the flowers very deep in colour; *D. Wardianum giganteum*, with flowers 5 in. across the broad petals, the colouring being specially bright; *D. Wardianum album*, *D. nobile Statterianum*, with large blooms also, which, by reason of their size, assumed a drooping form, and other varieties in a cut state, also a plant of *Epidendrum xanthinum*, with blooms clustered at the apex of the spike, bright golden yellow in colour. Award silver Banksian medal.

Baron Schroeder sent a small, but exceedingly choice collection of cut blooms, amongst which were grand spikes of *Odontoglossum luteo-purpureum* (sixteen flowers), very rich in colour and of extra size, and *O. hystrix* (fourteen flowers), both being the very finest varieties. Another splendid example was a four-branched spike wreathed in bloom of *O. Leeanum*, somewhat in the way of *O. Andersonianum*, but larger and finer, having golden sepals and petals spotted and blotched with dull chocolate, the flowers bearing a rich aromatic perfume. Of *Cattleyas* there were *C. speciosissima Schroederiana* of large size, with sepals and petals of the purest white, the lip also white with bright purple veins continued into the throat, the margin of the throat bright yellow; also *C. Baroness Schroeder*, a most beautiful variety, rich in colour and of unusual size, the sepals and petals rosy mauve, the lip broad and deeply fringed with deep golden markings. *C. speciosissima* in another fine variety was included, with a rosy purple flush on the sepals and petals, and the lip of bright colouring; *Lelia vitellina*, with bright orange sepals and petals, singularly beautiful, the lip being brighter. *Epidendrum dollense* (hybrid), of which a dense spike was shown, has small orange-scarlet flowers

very bright. *Lycaste Skinneri* was represented by a deeply coloured form (awarded silver Banksian medal).

From Mr. W. C. Walker came *Cymbidium* sp., after *C. eburneum*, but with larger and more expanded flowers. From Mr. Vanner, Camden Wood, Chislehurst, came *Cypripedium Rothschildianum* (Vanner's var.), distinct in colour, the ground colour being lighter and the veinings darker, thus affording a greater contrast; one spike bore three large blooms; *C. Vanneri* (*C. selligerum majus* × *C. Curtisi*), a distinct-looking hybrid, the petals of which bore very minute spots in great profusion. Mr. Cayley, Leigham Court Road, Streatham, sent two remarkably well-grown plants of *Phaius grandiflorus*, each of which was only three years old; one bore nine spikes and 183 flowers and buds, and the other eight spikes and 143 flowers and buds, both being very noteworthy examples. From Mr. De Barri Crawley, Rosefield, Sevenoaks, came *Odontoglossum Andersonianum album*, pure white with dark crimson spots, a lovely variety; also *O. Ruckerianum Juno*, with a deep rosy purple flush on the sepals and petals, and a good form of *O. Coradinei*. Mr. Bradshaw had a very distinct variety of *O. crispum*, with very pale oak-coloured blotches and spots. From Mr. Ashworth came *Dendrobium nobile Ashworthii*, with pure white sepals and petals very faintly tipped with light purple; also *D. nobile Ashworthii*, after *D. nobile nobiliss.*, but with a lighter centre, the growth tall.

Sir Trevor Lawrence sent *Dendrobium Tattonianum*, with minute, but pretty flowers; also *Eulophia Elizabethae*, with a splendid spike of twenty-two blossoms and buds. *Vanda coerulescens* was represented by a cut spike, the colour of the sepals and petals a light mazarine-blue, the lip being dark blue; this is a choice species. *Dendrobium erucetum* and *Cymbidium ensifolium* came from the same source. From Mr. Weetman came *Dendrobium Weetmannianum*, a distinct form of *D. nobile*, somewhat after *D. nobile Ballianum*, with the purple shade brighter and a creamy margin to the lip. *Odontoglossum hystrix* came from the same source (a fine variety).

#### Floral Committee.

There were not many exhibits before this committee, and, owing to the lateness of the season, no Daffodils appeared in competition for the special prizes.

Awards of merit were granted to the following:—

**CLIVIA MODEL.**—A magnificent variety, showing a marked advance upon older kinds; the truss very large and the flowers of fine size, with broad rounded petals, in colour a rich orange-yellow. Exhibited by Messrs. B. S. Williams and Son, Upper Holloway.

**ANAKYLLIS GORGEOUS.**—The name of this new kind truly describes its beauty. It has a perfect shaped flower of a dark rich self-crimson colour, brilliant in effect. Shown by Messrs. J. Veitch and Sons, Chelsea.

**STREPTOCARPUS GRATS.**—This, the result of a cross between *S. Dunni* and the now popular hybrid strain, is a very good kind. The leaves are long and broad, the flowers most profuse in thick clusters, borne on stout erect stalks and of a deep rosy purple colour. This also came from Messrs. J. Veitch and Sons.

**MIGNONETTE BUSH HILL WHITE.**—This is certainly one of the whitest varieties of Mignonette we have yet seen, but the flower-spikes were rather thin and the scent decidedly weak. Shown by Messrs. H. Low & Sons, Clapton.

Miscellaneous contributions were varied and interesting. Messrs. B. S. Williams and Son exhibited a group of *Clivias* made up of splendid kinds. The best, besides the one above mentioned, were *Surprise*, light orange-red, with large truss; *Scarlet Gem*, bright deep red; *Holloway Beauty*, soft orange-red; *Mme. Van Houtte*, light orange-red; and *Ambrise Verschallet*. Japanese *Camellias* of varied shades, the flowers less stiff and formal than those of the older types, were included in this exhibit, to which a silver Banksian medal

was awarded. A fine group of *Caladiums* staged by Messrs. J. Peed and Sons, of Norwood, received a silver Flora medal. The plants were well grown and the colours of the leaves remarkably bright. Some of the best were *John Peed*, rich red in the centre of the leaf, shading to green on the edge; *L'Automne*, greenish white, the leaf large and self-coloured, except a few light purple markings; *Charlemagne*, a variety having enormous leaves, those shown 18 inches long, 14 inches wide, the leaf veins deep red, this colour mixed with white running over the leaf surface with dark green at the edge; *Prince of Wales*, deep red veins, distinct light green in the outer parts of the leaf; *Ernest Caille* and *Triomphe de Comte*. *Strobilanthes Dyerianus*, a beautiful foliage plant, was also well shown in its characteristic rich colour. The group of *Cinerarias* from Messrs. J. James and Son, Farnham Royal, represented this flower in the greatest possible perfection. The plants were dwarf, their pots hidden by luxuriant leafage, crowned with trusses of splendid flowers, remarkable alike for their size and rich purity of colour, self decidedly predominating. A silver Flora medal was awarded. *Camellias* from Messrs. W. Paul and Son, of Waltham Cross, were very fine indeed, and the magnificent exhibit of this new neglected, unpopular flower fully deserved the silver-gilt Flora medal awarded to it. Plants in flower and cut specimens were shown, including all the best of the older kinds and many besides, comparatively new, in lovely and varied shades of colour.

Hardy flowers were well shown by Mr. T. S. Ware, of Tottenham, who had a large and very varied group. Daffodils in the best trumpet and star-flowered kinds, *Hepaticas*, single and double red, white and blue forms, *Primula cashmeriana*, *P. rosca*, *P. denticulata* and its variety *alba*, *Saxifraga Bursariana*, *S. luteo-purpurea*, *Iris reticulata*, *Trillium grandiflorum*, *Sanguinaria canadensis*, *Snowflakes*, and *Solomon's Seal* were noteworthy in this group, which received a silver Flora medal. Messrs. Barr and Son also exhibited hardy flowers in interesting variety. Daffodils, cut specimens in many varieties, *Anemone fulgens*, *Iris reticulata*, *Saxifraga oppositifolia* in several fine forms, *Scillas*, *Hepaticas*, the double *Ficaria ranunculoides*, and the new early flowering *Tulipa violacea* were the chief things. A silver Banksian medal was awarded. A similar award was given to an effective group of flowering and fine-foliaged stove and greenhouse plants, arranged by Mr. G. Wythes, gardener to the Right Hon. Earl Percy, Syon House, Brentford. A splendid group of cut specimens of *Beaumontia grandiflora* came from Mr. Pitt, gardener to Earl Cowper, Panshanger, Herts. *Azalea pontica alba*, with flowers pure white except a yellow stain on two petals; *Clerodendron splendens*, an uncommon, but very beautiful tender climbing plant, producing large, many-flowered trusses of deep orange-red flowers, and *Veltheimia viridifolia* came from the same exhibitor. A silver Banksian medal was granted. Mr. H. B. May, of Upper Edmonton, sent a group of early-flowering *Clematises*, showing how readily they can be forced into bloom. Such varieties as *Mrs. Quilter*, with flowers of medium size and freely produced, are most attractive, and the plants shown, though young, were wreathed in blossoms. A bronze Banksian medal was awarded. Mr. R. Backhouse, Sutton Court, Hereford, exhibited a star *Narcissus* named *Dr. Fell*, having perianth segments of a pale cream colour and a clear rich yellow cup of unusual breadth.

#### Fruit Committee.

The exhibits before this committee were few in number, though interesting, only one collection of fruit being staged and three of vegetables. From Mr. G. Wythes, Syon House Gardens, Brentford, came a dish of *St. John's Fig*, this variety being shown by the same exhibitor at the previous meeting, thus indicating its good qualities as a variety for forcing in pots. The fruits sent on this occasion were of good size, the flesh

white and juicy. The same exhibitor sent a very nice lot of early Asparagus grown in permanent beds, which are forced yearly. A cultural award was given to this exhibit. The grass was excellent for the time of year, showing the value of this method of forcing Asparagus. Mr. P. Davidson, Iwerne House Gardens, Blandford, sent a dish of Tomatoes named Veitch's Perfection, a seedling from Ham Green and Perfection, the fruits being ribbed and well flavoured, but not considered by the committee superior to Ham Green. Mr. H. Balderson, Corner Hall, Hemel Hempstead, sent a dish of two varieties of Onions, Ailsa Craig and Rousham Park, Ailsa Craig being huge bulbs, but much decayed. The exhibitor stated that he had many similarly affected; whereas smaller, but well-grown Rousham Park were quite sound with the same culture and storage.

## NOTES OF THE WEEK.

**The late spring.**—Last year the old double yellow Daffodil began to bloom in the Grass on February 11. This year the first bloom opened March 22.—J. H. W. THOMAS.

**Sopronitis grandiflora.**—We have received from Mr. T. Bonsall, Elmet Hall Gardens, Leeds, a splendid flower of this Orchid, rich in colour and very broad, measuring more than 2½ inches across.

**Spiræa astilboides floribunda.**—This is one of the best of herbaceous Spiræas, the long feathery panicles of pure white flowers being more graceful than those of either *S. japonica* or *S. multiflora* compacta. It rivals *S. astilboides*, but the panicles are not so thickly set with flowers.—E. M.

**Crocus Sieberi.**—In THE GARDEN for March 23 *Crocus Imperati* and *C. biflorus* are specially noticed. I think *C. Sieberi* may also be mentioned as a very worthy and early-flowering species for growing in the grass. It has been strikingly charming here during the past week.—M. A. R., *Liphook*.

**Erica carnea.**—The brightest flower of the present week is this pretty Heath in gardens where it has been planted in broad sheets and spreading masses. It is as hardy as our native Heaths and a precious early flower which opens in the first genial days and remains a perfect glow of colour for many weeks. It is surprising that we do not see more of it.

**Scilla sibirica multiflora.**—A very fine form of the Siberian *Scilla* now flowering came from the Dutch growers under the above name, but it appears identical with that shown at the Drill Hall on Tuesday by Messrs. Barr named *S. sibirica taurica*. It is a fine variety, much earlier than the type and more robust, producing in great abundance long strong spikes of flowers somewhat paler in colour.

**Manure for Grass fields.**—In reference to the inquiry of "Hayling" as to the best manure for Grass fields, I would recommend him to try malt dust. This is a strong nitrogenous manure and very cheap. Its effects are marvellous on grass crops, Potatoes, Strawberries, &c. Now is the time to sow it and its good effects will be quickly visible. I have just had in a ton for my tennis lawns and small paddock. Sowing it is dirty work and the best way is to scatter it about carefully with a shovel.—EDWARD FISON, *Ipswich*.

**Damage to trees.**—We gather from the papers the following results of the severe gale. At Sandringham about 2000 trees were blown down, some of them of special historic interest, whilst on the adjacent Castle Rising estate the destruction was even greater. Some large old Elms have fallen in Windsor Park, and at Warwick great havoc was wrought among the trees, some of the fine Lebanon Cedars in the Castle grounds being uprooted, and the main roads to Warwick blocked by fallen trees. Around Rugby School 17 great Elms were blown down in less than an hour. In the Peterborough district

many roads were impassable from fallen trees, and in Milton Park several hundred were uprooted. Around Sherwood Forest and on the fine estates adjoining considerable damage was done.

## OBITUARY.

**Mr. Thomas Worth.**—After a brief illness Mr. Thomas Worth, for many years past in the employment of the Liverpool Horticultural Co., and latterly of John Cowan and Co., of the Vineyard Nurseries, Garston, near Liverpool, died on Saturday, the 23rd inst., from influenza at the age of 31 years. Mr. Worth was a man of considerable promise. He was for some years in the employment of the late Mr. Enoch Harvey, and eventually became his Orchid grower. After some years he became Orchid grower to the Company, and for the past two years acted as traveller for Messrs. John Cowan and Co.

**Alexander Goodman More, M.A.**—We regret to record the death of the above well-known naturalist, which took place on March 22 at his residence, Leinster Road, Dublin. Mr. More was a native of Malvern, but had long resided in Dublin, he having formerly held the post of senior assistant, and eventually curator of the Dublin Natural History Museum, from which post he retired through ill-health some few years ago. His principal work is the "Cybele Hibernica," written in co-partnership with the late Dr. David Moore and published in 1866; and they also wrote a very interesting report on "The Climate, Flora, and Crops of Ireland," published (p. 165) in the report of the International R. H. S. Exhibition of 1866. Mr. More was one of the best living authorities on the British and Irish flora, and we believe had a new edition of the "Cybele" in hand at the time of his death. He was 64 years of age.

**Mr. William Dean.**—Lovers of the Pansy will learn with regret the death of Mr. William Dean at his residence, Sparkhill, Birmingham, on Saturday, the 23rd inst., somewhat suddenly, at the age of 70 years. Born at Southampton on July 8, 1825, his father being at the time foreman of the Hill nursery of Mr. W. Bridgewater Page, as soon as he left school he was taken into the office. In 1843 he went to Belfast as foreman to Messrs. Scott Bros., nurserymen, but after a short sojourn in the north he came to London and entered the nurseries of Messrs. E. G. Henderson and Son, St. John's Wood. About 1850 he started business at St. John's Wood, but after a few years the business was abandoned, and in 1853 he went to Slough under Mr. Charles Turner. Leaving there in 1857, he established a nursery at Shipley, near Bradford, York-shire, and about 1876 he came to London and took charge of the London branch of the Lawson Seed Company. When this was abandoned he went to Birmingham as manager of the Chad Valley nurseries of Mr. R. H. Vertigans, from thence to the Solihull nurseries of Mr. Thomas Hewitt, and later as manager to Messrs. A. Blizard and Co., Edge Lane Nursery, Solihull. From thence he removed to Dolphin Road, Sparkhill, Birmingham, and started as a florist, making a specialty of Pansies and Violas, where he died. He was the first to grow the Belgian or fancy Pansy in this country at Shipley. In 1862 Mr. Dean sent out new varieties of his own raising, and continued to do so for several years. While at Shipley he assisted in the editing of the three last volumes of "Gossip of the Garden," and when that work was discontinued at the end of 1863, he edited the "Florist's Guide" during its brief existence. Mr. Dean was one of the jurors at the International Horticultural Exhibition in 1866, of whom few still survive. He was assistant secretary to the Midland Counties Carnation Society, and in August last organised the successful Viola conference at Birmingham.

**The weather in West Herts.**—There has not been a single cold day for more than a fort-

night, and during the same period only two cold nights. On the 22nd the temperature in shade rose to 63°, which is the highest reading recorded here as yet during the present spring. At both 1 foot and 2 feet deep the temperature of the ground now stands at 44°. At the latter depth the temperature has never been higher this year, but at 1 foot deep it has fallen 4° since the 22nd. There has been lately a good record of bright sunshine, the average duration for the last five days amounting to 5½ hours a day. On the 24th the wind proved very boisterous, many of the gusts reaching the force of a whole gale. At 30 feet above the ground the mean velocity for the five hours ending 5 p.m. was 38 miles an hour, and the highest record for any hour 44 miles, between 2 and 3 p.m.—direction west. This is the highest velocity for any single hour that has been recorded here during the ten years over which my observations extend. In order to give some idea of the violence of some of the individual gusts, I may state that for a quarter of a minute the mean rate amounted to 60 miles an hour. *Scilla sibirica* came first into blossom in my garden on the 25th, which is six days later than its average date of first flowering in the previous eight years, and forty-five days later than last year.—E. M., *Berkhamsted*.

**Presentation to Mr. Wilson.**—A presentation was recently made by the Earl and Countess of Lindsey to Mr. Wilson, steward and head gardener at Uffington House, who is leaving after twenty-six years of service. The gift was a handsome watch and chain, which, when opened, showed the following inscription: "Presented to E. Wilson by the Earl and Countess of Lindsey as a token of sincere regard. March, 1895." Added to this was an elegant brass tripod lamp, also a gold scarf pin from the Ladies Bertie.

**Presentation to Mr. W. G. Head.**—A few months ago some friends of Mr. W. G. Head, judges and exhibitors at the Crystal Palace, formed themselves into a committee to raise a private fund with a view of making a presentation to Mr. Head in recognition of his work at the Crystal Palace. The presentation, which took the form of a purse of money, was made on the evening of Friday, the 22nd, at the Restaurant, Victoria Station. In the absence of Mr. William Marshall through illness the chair was taken by Mr. Richard Dean, the treasurer of the fund, who briefly sketched Mr. Head's career, commencing with his start at Arundel in 1853 under Mr. Geo. McEwen; thence to Shrubland Park, Ipswich, in 1856; from there to Drumlanrig in 1857, under Mr. McIntosh, where he remained four years. He then became gardener at Castle Dykes, Dumfries, but owing to ill-health returned to the south of England in 1863, and took a foreman's place at Abernant, South Wales, and later was foreman at Arundel under Mr. J. Wilson. In 1867 he was in the Chiswick Gardens of the Royal Horticultural Society, and from there went to Kew. In 1872 he went out to Calcutta and formed a new garden and nursery for the Agricultural Society of India, remaining there six years. He returned home in 1878, and soon after succeeded Mr. George Thomson in charge of the gardens and grounds at the Crystal Palace. The chairman eulogised Mr. Head's work at the Crystal Palace and his management of the various exhibitions, and concluded by handing Mr. Head the purse of money, with the hearty good wishes of all the subscribers.

**Fisher, Son and Sibray, Limited.**—This company was registered on the 21st inst., with a capital of £50,000, to take over the old-established business of nurserymen, seedsmen, and florists, carried on by the partners in Messrs. Fisher, Son, and Sibray, at Handsworth Nurseries, near Sheffield, Fitzalan Square, Sheffield, Church Street, Rotherham, and elsewhere.

**Names of plants.**—S. N. T.—1, *Eupatorium Wendlandi*; 2, *Alonsoa incisifolia*; 3, *Scalaeuella Kraussiana*; 4, *Franciscea calycina*; 5, *Franciscea macrantha*. E. Curtis. *Candelia cuneata*.—J. P. C.—Tree by *Altema arborea* (sens.)

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## THUNIAS.

THIS genus comprises several beautiful species, all of which are plants that enjoy a strong heat and plenty of moisture to grow them to perfection. Where these accommodations are at command, Thunias should be grown, for they are of exquisite beauty and make a bright display, the drooping racemes of bloom ranging in colour from white to bright purple. These plants enjoy a very pronounced period of rest after the flowering season, and thrive best when repotted annually. This should be done when the new growths begin to appear from the base of the old pseudo-bulbs, which generally occurs about the beginning or middle of March; therefore if repotting has not yet been done, I would advise it to be seen to at once. Good drainage is very necessary and the pots require to be about half filled with clean, broken pots, the remainder filled with a good porous compost of rough peat, fibrous loam and chopped Sphagnum Moss, with a good proportion of silver sand. Thunias are plants that may be easily propagated and root very freely; therefore nice specimens should be made up each spring. This may be done by placing several stems into a pot, according to the size, and which should be about 3 inches apart, firmly fixed by tying each bulb to a small stick. Water must be very sparingly applied until they become fairly established and the new growths well above the surface, when a liberal supply should be given throughout the summer and not be diminished until the foliage commences to change colour, when it should be gradually lessened until the plants are finally at rest. In the summer months whilst in strong, active growth an occasional application of weak liquid manure will be found very beneficial. When in the dormant state they should be placed in a light and dry place and water entirely withheld, and as soon as they are started at this season they must be placed near the glass in the East India house, for as much light as is available is necessary to ensure good results.

Thunias are natives of India, where they grow upon trees, and are widely distributed over the Himalayan Mountains, Moulmein and Lower Burma, usually at an altitude of from 1500 feet to 3000 feet. They are closely allied to Phajus, but even very distinct from that genus in having no pseudo-bulbs, and the blooms are produced upon drooping racemes about the months of June and July. The kinds below mentioned are all worthy of cultivation.

**T. ALBA**, a very useful kind, has been known for a number of years. It was introduced into this country about sixty years ago by Messrs. Loddiges, of Hackney. The sepals and petals are pure white, also the lip, the latter being beautifully veined with purple and yellow.

**T. BENSONI** is the most richly coloured in the family, having flowers some 3 inches to 4 inches in diameter, and of a beautiful bright magenta-purple colour. It is very free-flowering, and was discovered by Col. Benson some thirty years later than the preceding kind. It first flowered in the Royal Gardens, Kew.

**T. MARSHALLIANA**, a very pretty species, somewhat resembles *T. alba*. It has white sepals and petals, and the lip is white at the front, the

other portions pale yellow, veined with bright orange. It is, however, distinct, and a native of Moulmein. A form with a light yellow lip was named by the late Professor Reichenbach *P. Marshalliana ionophlebia*, but it is very scarce. These all grow about 3 feet in height, the last named being somewhat taller and more robust in habit, and all are well furnished with light green leaves. A grand addition to this group which must not be forgotten is the beautiful hybrid raised by Mr. Seden in Messrs. Veitch's nursery and also in the gardens of the late Mr. Tall, of Manchester, at the same time. This is named

**T. VEITCHIANA**, and was obtained by crossing *T. Marshalliana* with *T. Bensoni*. It produces fine flowers with white sepals and petals, flushed with deep rosy purple at the tips, the front lobe of the lip being bright purplish rose with fringed lines of orange on the disc, the side lobes white.

WM. HUGH GOWER.

**Platyclinis glumaces**, or, as it is more familiarly known in our gardens, *Dendrobium glumaceum*, is one of the most elegant little Orchids that produces its flowers during the early months of the year. I have recently noticed this doing remarkably well in several collections in the neighbourhood of London. It always appears to form a well shaped plant and flowers very freely; the long filiform pendulous raceme of white blooms has a graceful appearance and a very pleasing fragrance.—H. G.

**Cypripedium Druryi**.—This is one of the most distinct species we have, but, unfortunately, appears to be getting a scarce plant. The flowers are produced singly upon erect scapes, and measure about 3 inches in diameter. These are of clear yellow throughout, the lip having a more golden shade than the other segments, the black broad central band on the sepals and petals being very characteristic. This kind, unlike the majority of members in this family, does not vary in either size or colour. It is a native of the Travancore Mountains, India, and is at present well represented in The Firs collection at Sydenham. The blooms being so thick in texture keep in full beauty longer than those of other kinds of *Lady's Slippers*.—W.

**Cymbidium eburneum**.—This lovely species is one of the finest in the genus, and a few years ago was an exceedingly rare plant. At the present time, however, it is to be found in most collections, and always attracts admiration when in bloom. A flower of this comes from J. Pocock, but it is small in size. No doubt it will improve another season when the plant becomes better established. I recently noticed a fine form flowering in Mr. Dorman's collection at Laurie Park, Sydenham. It is about seventeen years ago since it was first flowered in this country, and is a native of the Khasya Hills.—W.

**Cypripedium Chamberlainianum (J. C. W.)**.—This pretty and distinct species was introduced quite recently by Mr. Sander, of St. Albans. It produces many flowers upon an upright stem, and is quite different in formation to any other kind yet in cultivation. It appears to be a continuous bloomer, for I have seen it at different places nearly the whole year round. The petals have a peculiar twist, one being curled one way and the other the reverse, a peculiar character not to be found in any other known kind. The principal merit of this species is its lovely bright rose-coloured pouch, which will no doubt be the means of producing more vivid colours in the lip of future hybrids. It is certainly worthy all your attention.—W. H.

**Dendrobium nobile and its varieties**.—At this season of the year when this useful species is in flower it is remarkable to see its extensive variations. *D. nobile* and *Odontoglossum crispum* are two Orchids grown in larger quantities than any others, especially for cut blooms, for which they are most admirably adapted. I have received several blooms of *D. nobile Cooksonianum*, but the best form I have seen this season is flower-

ing at Cambridge Lodge, Camberwell. The flowers there have the large maroon blotch on the petals, extending a long way down and of exceedingly bright colour. Another beautiful form of this comes from James Ingle for a name. This is a fixed sport from the typical plant, for it has appeared in several collections and occasionally turns up amongst importations of *D. nobile*. No doubt the deepest coloured form of this species is *D. nobile nobilium*, which is of rich amethyst-purple, slightly paler at the base of the segments and with a white zone surrounding the very deep-coloured blotch on the lip. The individual flowers are also larger than those of the type. There are many plants called by this name which are nothing but good coloured ordinary forms, the true variety being still very scarce. A nice plant is at present flowering in The Firs collection, Laurie Park, Sydenham, where this family of Orchids is made a speciality.—G.

**Cattleya Trianae**.—Flowers of this very useful spring-flowering *Cattleya* come from various correspondents. They vary considerably in colour and markings, the majority being very beautiful, but as there are already some most distinct named varieties, I do not think it advisable for every plant to receive a varietal name. This would only lead to a great deal of confusion. At the present time we have such an enormous quantity of this species in cultivation, that what one considers as a unique form may generally be found in several other collections. The flower from "J. C. W." marked "alba" has a decided tint of rose in the sepals and petals, and therefore cannot be called a pure white variety.—W. H. G.

## HARDY CYPRIPEIDIUMS.

THE essential details in the culture of hardy *Cypripediums* are moisture, shade, and a soil mainly composed of peat and leaf soil. Where it is intended to grow them in the open ground—and nowhere do they flourish so well and continue healthy so long—it is best that some special preparation be made for them. In the first place a suitable position must be chosen, and one sheltered from the north and east winds possessing the needful shade overhead will do well. The next step will be to excavate the soil 18 inches deep, or if the soil be light and well drained 12 inches deep will be sufficient. In the case of clayey soils, a few inches of rough crocks or clinkers will be necessary to form a drain, which is not needed with light soils which drain freely. The hole may now be filled in, using roughly chopped peat and half-decayed leaf soil in about equal parts, with the addition of some rough charcoal nuts and Sphagnum Moss if obtainable. In this mixture the plants invariably do well provided a sufficient supply of moisture is forthcoming in the growing season. This latter may be easily arranged by either utilising the overflow from a fountain or by conducting water to the bed in pipes. Surrounding the bed with a perforated pipe where the supply could be regulated would be a simple as also an efficient way of ensuring the requisite moisture, which in the growing season should be at semi-saturation point. In planting it is important that the roots be spread out horizontally and not thrust into a small and deep hole, for if treated thus they will assuredly rot. A very cursory glance at the tufts of *Cypripedium spectabile* will give some idea of the mode of rooting in this species, and this will constitute a good guide. Frequently many roots perish either during transit or by exposure prior to being packed, and are best cut away as close to the crown as possible. When placing the plants in position, let the hole be as wide as the extent of the roots; indeed this is the better way when planting large beds, carefully firming the soil and covering the crowns 2 inches deep.

*C. SPECTABILE* is at once the best and most vigorous species from an all-round standpoint, the sepals and petals white, with rose-coloured much-inflated pouch. In this species the colour varies somewhat, always, however, more or less rose tinted.

*C. PUBESCENS* has sepals and petals of yellowish brown with yellow lip. Very similar in respect of colour is the smaller-flowered and fragrant

*C. PARVIFLORUM*, of equal hardiness and simple requirements.

*C. CALCEOLUS* has sepals of a brownish hue and pale yellow labellum. This species is sometimes found growing in leamy soil, though it does not appear essential, as it grows quite well in the above-mentioned material and with less abundant supplies of moisture.

These are the more vigorous growers of this group, attaining a height of from 12 inches to 20 inches, and being usually procurable in good-sized plants, produce a good effect when grouped together in the open ground. The remaining species, by reason of their rarity and small size, are perhaps safer grown in pans in a cold frame till well established. These include the dwarf growing *acaule*, the lovely *guttatum* and *macranthum*, *occidentale*, and the rare *C. arietinum*, seldom seen in cultivation. *C. californicum* is a newer kind, growing when established 2 feet high and producing axillary blossoms, therefore one of the most distinct. E. J.

#### NOTES FROM THE ISLE OF WIGHT.

IN your impression of the 23rd ult. Mr. Miles writes, "Following Mr. Smith's advice, I will only say that here, with a zero frost, *Carpenteria californica* seems quite safe." I am sorry to say that Mr. Smith's advice on this head quite escaped me, and I have not seen it at all, so that I should feel much obliged to Mr. Miles if he would tell us more clearly what the measures were which he took and which served him so well. This is a point on which I feel a great deal of interest just now, and I should welcome enlightenment from any quarter from which it may come. A very fine specimen indeed of *Carpenteria californica* which has been in my garden for years has been terribly mauled by the frost. I think it is alive and will break out again in due time, but that is all I can say for it, and I shall be glad to have my anxiety allayed on this head. It was wrapped round and round with folds of an old herring net which I bought for the purpose, and which has answered well enough till this terrible season, but I cannot say that I am satisfied with it under existing circumstances. Nevertheless, in most years the idea has proved to be a good one. I am indebted for it to Miss Jekyll. The net, of course, has allowed free ventilation and has generally given sufficient covering. The late Sir Wm. Hutt was excessively fond of flowering shrubs, and he had a fine collection of them at Appley Towers. He was, for the most part, against any covering at all, and denied its usefulness. I have often had a conversation with him about this matter. Now what is the state of the case with those very shrubs? I have not had time to go over and look at them, but his nephew expects great losses will soon be apparent, and speaks very dolefully about it. Altogether, I think it is a rather difficult thing to know how to act for the best. If we could forecast the future at the beginning of the winter, the whole matter would be easy enough. The question now really is, what is the best average solution of a very great difficulty? I should have done a great deal more for my own shrubs than I esteemed to be necessary for them if I could have anticipated that we were going to have 23° of frost in the Isle of Wight. Such a thing was never dreamt of before by the oldest inhabitant. But while wrack and ruin are the burden of our song, it is always curious to notice some strange exceptions to it. I sent a blossom of *Narcissus monophyllus* to Mr. Barr last week which was taken from the open

ground, and which was, perhaps, the very last bulb in my garden which I could have supposed would perform in that way. *Poinciana Gillesii*, which is treated to a pot and kept in the temperate house at Kew, did not seem to mind the cold in the slightest degree, and is now in a very good condition. It had no covering at all and is completely uninjured. These things are strange, and we may have stranger still.

HENRY EWBANK.

P.S.—I should, perhaps, say that *Narcissus monophyllus* had a bit of glass over its head affixed to one of Mr. Wood's holders, but even then its survival and blossoming in that way are curious.

#### LIFTING LARGE TREES AND SHRUBS.

THE assistant secretary read the notes on "Lifting Large Trees and Shrubs" sent by Mr. Crasp, who was to have lectured on March 26. Mr. Crasp stated that many trees were too much crowded at planting, this often being done for shelter. The remedy usually adopted was to cut away growth, but much could be done by lifting to other sites and thus give space. New pleasure grounds and parks were often bare of trees, and to improve this, lifting large trees gave the owner a valuable effect at once, and he stated that large trees, no matter how old or large, could in the hands of experienced men be transplanted without injury and removed a long distance, thus avoiding cutting away. On many estates great improvements could be made by removal of large trees and the landscape improved. He ventured to state that the work of lifting was not such a costly matter as many supposed, and there was no question as to the work being a success. Conifers were specially suitable for lifting; also large Cedars; these could be lifted when from 20 feet to 50 feet in height. He mentioned the only species he had failures with was *Abies Pinsapo*. There was no difficulty in lifting trees twenty to one hundred years old, and he advised the work to be done in early autumn, September being the best season. There is greater chance, too, of new roots being formed at the time named, as the sap had practically done its work. The size of ball, even for large trees, need not be great, but the soil must be firm. If the ball be about 8 feet in diameter that is sufficient, and if at all loose the soil must be securely bound up with matting or a wooden frame to prevent injury to the roots. Dry soil would require much moisture, and before getting under the roots a trench 5 feet wide and 4 feet deep should be made. Mr. Crasp then referred at length to the system he adopted, the mechanical appliances necessary, the need of ample water at the roots, and spraying the tops of trees after removal.

The chairman (Mr. Cheal) gave some interesting remarks on the subject, naming various instances of old trees being lifted successfully.

#### AMARYLLIDS AT CHELSEA.

EVERY year at this season the house in Messrs. Veitch's Chelsea Nursery given up to the *Amaryllis* is a feast of colour, the many hundreds of spikes creating a display of one flower in its many forms that could not be seen in any other country. The exhibition, for such it may be appropriately described, shows not the slightest falling off from the splendid displays of previous years, and there is this important feature, too, that this year's plants are all seedlings, none, or at least very few old varieties being represented. The gradual weeding out of everything that does not attain a certain standard of perfection has resulted in every flower now to be seen in this nursery being almost faultless in form and colour. Mr. Heal has worked steadily and successfully towards eliminating the green in the flower and its starry form, and in the near future green will not be a colour to disfigure the *Amaryllis*, for such it does, as it is objectionable in association with many of

the shades of crimson and allied colours. Several of the finest novelties are selfs, one splendidly defined colour, and it is these rich self colours that are such a picture at Chelsea.

But the hybridist has gained many points. One gets now a strength in the plant unknown in the earlier days of the *Amaryllis*, bulbs bearing two sturdy spikes crowned with bold flowers delightful either for colour or symmetry, and there are many more light-toned varieties. We have often expressed the opinion that a pure white *Amaryllis* is in the near future, and certainly the varieties at Chelsea now in bloom point strongly to the accomplishment of this ideal, and such a flower will be of extreme beauty, welcome in many forms of decoration with suitable foliage plants for contrast. The display at Chelsea is an object lesson in showing what the hybridist may accomplish in moulding, so to say, a flower into a certain form and adding to the variety of colouring. An *Amaryllis* of not many years ago would look poor indeed against the splendid varieties that now grace the plant house, stately spikes bearing blooms of great breadth and charming colouring. The segments of some of the flowers we measured were nearly 5 inches across, and yet one could not accuse the raiser of getting coarseness into the blooms. The *Amaryllis* named Dr. Masters is an example of beautiful proportion in the flower, but this kind does not now stand alone in this respect, as an inspection of this year's exhibition will show. Many others are finer than this, the flowers conspicuous for symmetry and colour.

It seems that perfection has been already reached in this flower, but that is what we wrote some time ago, and yet as each April comes round one discovers an advance either in form or colour. This year the light-coloured varieties make a decided break amongst the forest of spikes of crimson and orange-scarlet kinds, and in every greenhouse or conservatory worthy of the name a good group of *Amaryllids* should be placed, the spikes being relieved with foliage plants of not too tall stature.

It seems unnecessary when the list of varieties grows to such a length each year to mention varieties, but the following must be recorded. Amongst the light-coloured kinds all of the following show a distinct advance: *Cupid* is very pretty, white, with a veining of scarlet, *Norma* being distinguished by crimson lines; whilst in a kind named *Brandon* we get an unusually fine flower, with very broad, robust segments, only the upper portion with the veining of crimson. *Idea* is almost colourless and a dainty flower which we can scarcely have too much of, and the same may be said of *Ilam*, another exquisite flower for purity. *Armoire* is very large, but not coarse, with a feathering of scarlet on the segments; *Panacea*, *Hilda*, *Caudonald* (very fine flower), *Crinia*, *Maer* (very charming), *Marmorata* and *Otley* being all splendid acquisitions to this section.

Amongst the dark-coloured *Amaryllids* many kinds of great beauty could be found, none more so, however, than one named *Macar*, the flower of superb form, not large, and of a rich quite self crimson, with a satiny lustre on the segments as if shot with a pellucid velvety suffusion of a more intense tone than the actual body colour. *Patna* is a bold flower, crimson-scarlet; *Anatino*, bright scarlet; and *Gorgeous*, of very large size, but without coarseness, the flower deep self crimson. We may also mention *Hadsor*, crimson; *Guthrie*, bold and brilliant orange-scarlet; *Carridon*, very large, the colour bright orange-scarlet; *Finedon*, one of the boldest flowers in the collection and crimson-red in colour; *Asta*, pure crimson-scarlet, a beautiful flower for symmetry and tone; *Roydon*, a glorious *Amaryllis* with broad segments, brilliant orange-scarlet in colour, and *Lucan*, of a similar shade. The flowers of the dark-coloured section present a bewildering variety of shade, so that it is difficult to describe them, but it is this colour variety that we cannot have too much of, especially when there is happily no tendency to get muddy purples, magentas, and other objectionable flowers, such as disfigure not a few other classes of plants

## STOVE AND GREENHOUSE.

## MARGUERITE CARNATIONS.

THESE CARNATIONS have now been in cultivation some few years, but they are not at the present time gaining in favour. For this there must be some cause, not necessarily the same in each particular instance, but none the less so. Being raised as a rule from seed rather than from cuttings, there is a predisposition to make a luxuriant growth, not altogether robust perhaps, but of rapid development and consequently sappy. This should be guarded against by not using too rich a compost from the very commencement. Under pot culture it will be better to employ chiefly loam and sand with a little leaf-soil if the former be at all of a heavy character. It will be better also to err on the side of small pots rather than the opposite extreme. Some of the best flowers I have seen were from plants in

a strong one in this strain. This no doubt arises from their parentage, this Carnation in all probability being related to *Dianthus chinensis* or the Indian Pink. Where it is not convenient or practicable to grow a stock of the other Carnations in pots, there the Marguerite Carnation will be the most useful. As in the case of all seedlings, there will be a percentage of singles which should at once be destroyed.

PLANTSMAN.

*Spiræa compacta multiflora*.—Despite the fact that the herbaceous plant so generally grown for forcing under the name of *Spiræa japonica* is not a *Spiræa* at all, yet it is so universally known as such that the general public will not recognise any name other than that it has so long borne. That at the heading of this note is a variety of the common kind, in which the inflorescence is borne in a denser and more compact manner than in the older form, but whether superior to it is doubtful. I prefer the lighter and more tapering spikes of the common kind, while others look upon the

as an admirable setting to them. It is of very easy culture, and all that is needed for forcing is to lift the clumps from the open ground and put them into pots in a cold frame, from whence as the spring advances they may be taken into the greenhouse, where a little group of good flowering examples is very bright and cheerful as well as uncommon.—H. P.

## CARNATION NOTES.

I AM much obliged to Mr. Douglas (p. 163) for answering my inquiry respecting the variety Duke of York. The great drawback with so many of the Tree Carnations is their unwillingness to flower freely in the dead of winter. December, January, and February are the three months in which these flowers are most useful to me. For this reason I have discarded several good varieties which do not open their flowers until March, house room being somewhat limited. Good winter-blooming yellow Carnations seem scarcest of any.

Pride of Penhurst is often quoted as belonging to this section, but with me it never did much till spring, and did not seem to care for any but the coolest treatment. I used to grow Andalusia, a very pale yellow fringed variety, but have now discarded it, as it is a poor grower and a shy flowerer—at least, that is my experience of it. Mr. Douglas mentions Mlle. Carle as being one of the freest whites. This I have grown for some years, but as quantity for cutting is my chief need I shall grow less of it in future, the new variety La Neige far exceeding it both in freeness of growth and free flowering. For every bloom of Mlle. Carle I get three or four of La Neige, each plant being simply laden with blooms and buds, which do not burst and are beautifully scented. I feel certain that when La Neige becomes more widely known it will be largely grown both for private and sale purposes. In regard to Miss Joliffe Improved, I am of the same opinion as Mr. Douglas, viz., that there is no difference between it and the original variety. I do not now label my plants of Miss Joliffe, and cannot distinguish the one from the other. To grow Tree Carnations well they ought not to be mixed with other subjects, but have a house or part of one to themselves. Many batches of what would otherwise be useful plants are ruined by too much heat in winter. I never care for a higher figure at night in the Carnation house than 45° in mild weather, and when by reason of frost more pipe-heat is needed, 40° will keep the plants safe. Slight fortnightly fumigations to prevent attacks from green-fly are best, as if once this pest gets into the points of the young shoots it is often most difficult to eradicate.

J. CRAWFORD.

## FLOWER GARDEN PESTS.

PERHAPS the smallest in size of our garden pests, but by no means the least in respect of the damage it does to plants, is the red spider. Its name is not very appropriate, as it is not a spider, but a mite. As, however, it spins a kind of loosely-made web on the undersides of the leaves, it is not to be surprised that it has received the popular name of red spider, particularly as its scientific one—*Tetranychus telarius*—does not convey much meaning to the ordinary gardener. This little creature is a most tiresome and destructive pest wherever it makes its presence felt. It is very indiscriminate in its choice of the plants it feeds upon and attacks those grown under glass as well as those grown in the open air. When this pest is present in large



Marguerite Carnations in a jar. Engraved for THE GARDEN from a photograph sent by Miss Barrowes, Moreton House, Buckingham.

quite small pots. Firm potting will also tend to better results, whilst no artificial feeding should be allowed until the plants are well advanced in the flowering stage. Another mode of culture is that of planting the seedlings out, but the same lines as regards soil and its firmness must be observed. If planted out the growth will be greater, whilst a more bushy habit will result. So far there is an advantage, but sufficient time must be allowed for fresh root action when lifted before cold weather again sets in, otherwise the results will not be good. In any case plenty of light is absolutely necessary to aid in maturing the growth. The seed should have been sown early in March, but it is not yet too late to do so. Do not, however, endeavour to make up for lost time by raising and growing the young plants in too much warmth. By the time the seedlings are pricked off a cold pit or house will afford sufficient protection for them. Although there is in some instances a perceptible fragrance, this much appreciated merit of the Carnation is not

newer form as the best. For many years there has been a golden veined variety of *S. japonica* in which the inflorescence is an exact counterpart of the newer *compacta multiflora*, so that this would seem to have originated from the variegated form. This last, I see, received a first-class certificate from the R.H.S. as long ago as 1869. The variety *compacta multiflora* has certainly been largely grown within the last two or three years.—H. P.

*Begonia manicata*.—"H. P." (p. 205) does well to call attention to this winter and spring flowering *Begonia*. Not only does it succeed under the conditions mentioned, but it grows freely and blossoms abundantly in an ordinary greenhouse. For this reason it is more valuable to many than it would be if always requiring a warm temperature.—E. M.

The spring Bitter Vetch for forcing.—This, which was illustrated on page 186, though thoroughly hardy, is very useful for flowering under glass for the embellishment of the greenhouse during the spring months, for the peculiarly coloured flowers are borne in great profusion, and the bright green freshly expanded leaves serve

numbers the leaves on which it feeds soon turn a sickly yellow colour and look as if they had been scorched, for the sap of the leaves is drawn off by myriads of these little mites, which congregate on the undersides of the leaves, where they spin a very delicate web, in which they live and multiply very rapidly. This web and the excrement of the red spider soon choke up the pores of the leaves. The latter deprived of their proper amount of sap and unable to obtain the carbon from the atmosphere which they need are soon in a sorry plight. Melons, Cucumbers, Vines, Hops, Kidney Beans, Roses, Strawberry plants, Orchids, Cacti, Ferns, Laurustinus, Lime and fruit trees are the special favourites of these pests. Red spider has a great dislike to moisture, and it is in dry seasons that plants suffer most from it. If, however, plants are not allowed to get too dry at the roots they will not suffer nearly so much as if they are. These little creatures breed with great rapidity, and it is well to take any plants which are attacked by them in hand at once. The red spider lays its eggs among the threads of its web; they are round, white, and, of course, very minute, when we remember that the full grown parent is hardly more than the sixtieth of an inch in length. They are hatched in about a week, and the young at once begin to feed. It may be a matter of surprise how such minute creatures can pierce the comparatively tough skins of leaves, but it must be remembered that they usually feed on the undersides of the leaves, which have more delicate skins than the upper ones, and that their mouths are furnished with a pair of mandibles, between which is a pointed sucker or beak. As I have already mentioned, their greatest enemy is dampness, either in the atmosphere or in the leaves. Situated as they are on the under sides of the leaves, which, owing to their drawing off their juices, curl more or less, they are not much affected by rain, and for this reason when wishing to destroy them by means of syringing, care should be taken to direct the insecticide against the under sides of the leaves. A great deal may be done in keeping the attacks of this pest in check by syringing with plain cold water, but if the attack be a bad one, one of the following mixtures should be used. Sulphur is one of the most efficient agents for killing it, but in its ordinary form it will not mix well with water, but should be treated according to the following manner: Boil together in 4 gallons of water 1 lb. of flowers of sulphur and 2 lbs. of fresh lime, add  $1\frac{1}{2}$  lbs. of soft soap, and before using, 3 gallons more of water, or mix 4 ozs. of sulphate of lime with 2 ozs. of soft soap, and when well mixed add 1 gallon of hot water. Tobacco water and soft soap is also a good insecticide for this pest. The red spider usually passes the winter under some shelter, often choosing stones, rubbish, &c., near the plants it infests, so that all such things should be carefully removed. It cannot be insisted on too often or too strongly that leaving rubbish, stones or anything about in gardens under or in which insects can shelter themselves is the most foolish thing to do, as under such circumstances it is impossible to keep a garden free from many kinds of pests. Gooseberry bushes which are attacked are often much benefited, particularly in warm, dry seasons, by a good mulching, but this mulching must not be allowed to remain under the bushes during the winter, as it may form a harbour for the red spider.

Roses may probably, with little fear of contradiction, be considered the favourite flower in gardens, and as such is perhaps cultivated more

than any other flower. The Rose is, however, unfortunately attacked by a great number of insects. In my last article I dealt with the aphides, which are their most hurtful enemies. The various kinds of Rose maggots also do an immense amount of mischief at times. These maggots destroy the foliage, which they not only utilise for food, but by curling the leaves up or by fastening two or three together, form a secure dwelling place in which they are safe from the attacks of many enemies. These caterpillars are remarkably active, as everyone knows who has attempted to catch them. Snugly ensconced in the shelter which they have prepared, when you open the leaf which contains them they wriggle out and drop before you have fairly caught sight of them. Some choose the Rose buds, which they destroy and entirely prevent from coming to perfection by eating holes into them. These insects are the caterpillars of several kinds of small moths which belong to the family Tortricidae. The moths are small, brownish or greyish insects, measuring from half an inch to 1 inch across the wings when fully extended. There are quite seven or eight species which feed on the leaves and shoots of Roses. There is not much to be done in the way of applying insecticides for getting rid of these insects, as from the way in which they shelter themselves it is very difficult to make any insecticide reach them; and from what I have just said, it is by no means easy to catch them alive. Pinching the rolled leaves or those that are spun together is the easiest way of disposing of these caterpillars if you can make sure that the caterpillar does not drop out during the operation, but perhaps the most certain plan is to hold a basket under the leaves or buds, so that when they are cut off they will fall into the basket, and the caterpillar will be caught if it tries to escape. The basket must be one out of which they cannot drop. The leaves and shoots cut off should be burnt or laid on a hard path and a roller passed over them. When the bushes are pruned in the spring the shoots which are cut off should be burnt, as there are often eggs laid upon them.

Besides the caterpillars of these moths there are some much larger ones which feed on the leaves of Roses, gnawing great notches at first in the edges of the leaves and eventually reducing them to mere skeletons. They do not attempt in any way to conceal themselves, but owing to their colour they are not easily recognised until you happen to notice one, when the others (for there are generally a considerable number on the same bush) will at once be seen. These caterpillars are the grubs of the Rose saw-fly (*Hylotoma rosarum*). When full grown they are about three-quarters of an inch in length. Their heads are yellow, their bodies are yellowish on the back, greenish at the sides and white below; both backs and sides are sprinkled with small shining black tubercles, which bear a few fine hairs. Soon after they are full grown they descend to the ground, and, burying themselves, each becomes a chrysalis within a cocoon. The insects of the first brood remain in this condition nearly two months. From those of the second brood the perfect insect does not emerge until the following spring. The most effective way of getting rid of this insect is to pick them off the bushes by hand, but syringing with the extract from 3 or 4 lbs. of quassia chips added to 2 lbs. of soft soap and mixed with 50 gallons of water, as recommended for green-fly, or the recipe of tobacco water and soft soap would no doubt be useful.

Another species (*Eriocampa rosea*), which is not a very troublesome pest, feeds on the upper

surface of the leaves much in the same way that the Pear slugworm does. And yet another species (*Blenocampa pusilla*) rolls up the leaves until each leaflet forms a little tube in which it lives. This species is by no means an abundant one, and I have never known an instance in which it was the cause of any real injury to the plants. The grubs are quite small and several live in the same leaf. Gathering the infested leaves and burning them would be the simplest and most effective remedy.

G. S. S.

#### FROST IN THE FLORIDA ORANGE GROVES.

WHILE we are deploring the effect of the long frost, a story of devastation comes from semi-tropical Florida before which our disasters, grievous as they are to us, sink into comparative insignificance, for it is a story of ruin, widespread and absolute. I had heard a report that the Orange groves had been badly damaged by frost, but had received no particulars until a friend's letter reached me the other morning. He has now been in Florida for nearly twenty years, and his groves have occasionally suffered during the "cold snaps," but the possibility of such a visitation as that of the past winter had never been contemplated even by the most pessimistic.

He wrote that everything had promised an exceptionally favourable season, that when the frost came things were looking better than he had ever known them. The Orange groves had extended year by year. Each year the quantity of vegetables grown for the New York market had been well-nigh doubled, and with each recurring winter a larger concourse of visitors flocked to the southern peninsula in search of sun and the warm sea breezes of the Gulf of Mexico. Then, in the early morning of December 29, after a noonday temperature in the shade of 77° on the preceding day, the thermometer fell to 14°, a drop of over 60°. Needless to say that thousands of acres of early vegetables were killed, as were the young plantations of Oranges, which were estimated to cover in the State of Florida an area of nearly 100,000 acres, while the bearing groves, on which a heavy crop of Oranges was approaching perfection, were denuded both of fruit and leaves. Florida's planters, being for the most part natives of our islands, did not fold their hands, but set to work in earnest to repair such damage as was reparable. The young trees were killed; time would show whether the old trees would recover or perish. In neither of these cases could anything be done, but there was still time to retrieve the loss of the vegetables, and these were therefore planted in larger quantities than before. During five weeks of rains and genial warmth these crops flourished amazingly and gave promise of a bountiful return, when once more, after a hot day, the wind in the night flew round to the north-west and the thermometer again fell to 14°.

On the subject of this second frost I quote from a letter which I have seen that bears out in almost every detail the experiences of my friend. "Contrary to expectations, the bearing groves threw out a splendid new growth, and in a month's time had put out their flowering spurs, showing in the majority of cases an immense bloom. On Thursday, February 7, at noon the thermometer stood at 70°; on Friday morning at 6 o'clock it stood at 14°. The trees were just coming round from a knock-down blow, and, without the protection of their leaves, suffered proportionately more. Grove land worth 1000 dollars an acre last week is not worth 1 dollar an acre to-day." Both the writer of this letter and my correspondent agree in saying that the effects of these disastrous frosts will mean depopulation of the State and ruin to many of the present dwellers in it. Planters who have resided in the State for a number of years and who have done well will be able to tide over the lean time coming, and, if they wish, to extend their holdings at a merely nominal cost; but for such

as have but lately started in the business of fruit and vegetable growing, and who have little or no capital to fall back upon, the prospect is black indeed. S. W. F.

## KITCHEN GARDEN.

### SUMMER LETTUCES.

To get a good salad in the summer months it is necessary to grow those varieties which stand hot weather, and for that purpose Cabbage Lettuces are best. They are also preferred by many for eating, the leaves being more tender and readily blanched. The Cos varieties are much grown by market growers for sale during the summer months, and those who supply the markets may question my assertion as to Cabbage varieties being best for summer use. My note, however, refers more to home culture. Salad during the hottest part of the year is most appreciated, and to get a good salad the best blanched Lettuces are required. Those who study quality in salads prefer kinds which give a large quantity of blanched leaves, crisp and sweet. A great deal depends upon the selection of varieties for summer use, and I find it best to grow two or three kinds. Those that will do best in hot dry seasons are most suitable for summer crops, but for spring I have a wider selection. Frequent sowings are necessary on different aspects, and above all in rich or well-manured soil to prevent plants failing or a scarcity at any time.

Lettuce during the summer often fails, drought and heat being the principal causes. In a moist, rich soil there are fewer failures, and with summer crops it should be borne in mind they are sooner over. Frequent sowings should be made in small quantities, selecting various positions of the garden according to the season. Many failures occur by thick sowing, others by transplanting, both to be avoided by sowing often and giving the plants room to develop. To get a regular supply of good Lettuce I advise sowings to be made fortnightly up to the middle of July, and if sown in good well-enriched land there will be abundant supplies at all times and of good quality. For early summer cropping I reserve a richly manured border under a wall facing east, and for July supplies a north border. For later crops at the end of July and through August it is a good plan to sow a single row between the Celery trenches. The plants delight in the well-worked soil and are of splendid quality for late summer use, as at that season there is less fear of collapse. I have seen north plantations fail, but much depends upon culture. If the soil is well manured and dug, with due attention to thinning and moisture, there is no fear of failure; but it is essential to have plenty of good solid manure not more than 6 inches under the surface to provide a rich root run.

As regards summer varieties, some kinds are less suitable than others, but in dry, sandy soils few varieties equal the one here illustrated.

The Drumhead Lettuce is a large type and certainly one of the best summer Lettuces grown. It is known under many other names, such as the Malta Lettuce. The Neapolitan is a form of it, and there is the Standwell and New York, doubtless selections of the Drumhead, and all good for summer use, being of sweet, crisp flavour and well adapted for soils in which others do not succeed. The Drumhead is a large grower, with the centre leaves well formed over the heart of the plants. When cut up for salad it is beautifully blanched and of a sweet taste, which many of the loose green Cabbage varieties lack. It is much grown in hot climates, hence its name, the Malta and Neapolitan. The Standwell referred to is closely allied to the Drumhead and has the same merits, being a long time before running to seed. There are two varieties, green and brown. I prefer the latter, it being more like the Drumhead in flavour. Other good kinds are Favourite and New York, the first somewhat like Drumhead in appearance, size and quality, the outside leaves being more curled. New York is a newer introduction, remarkable for its size, excellent quality, and the length of time it



*Drumhead Lettuce. From a photograph sent by Mr. Jas. Sharp, Finchden Cottage, Teeterden.*

stands without running to seed. It is solid, crisp, and of splendid flavour; indeed, if I were restricted to two summer varieties I should give New York and Drumhead the preference.

G. WYTHES.

**French Bean Newington Wonder.**—Although this Bean is seldom met with, it is one of the best for early work in pots or boxes. Indeed, there is, I think, very little to choose as regards cropping, earliness and quality between Newington Wonder and the well-known Osborn's Forcing. It is naturally dwarf, and does not run up spindly in dull dark weather like some sorts that are commonly forced early in the season. When first sent out it was grown extensively by the London market growers, a sure proof of its merits. According to my experience the best Beans for forcing are Newington Wonder, Osborn's, Syon House and Ne Plus Ultra. The last is perhaps more suitable for sowing from January onwards than earlier. Syon House is now ignored by many, but I have always found it serviceable.—J. C.

**Early Cauliflowers.**—I quite agree with Mr. Wythes that there is a decided gain in the time of cutting early Cauliflowers by sowing in the autumn. We hear a great deal about losses from the opponents of the system through the severe

winter and other causes, but this is entirely imaginary and not borne out by facts. I have got this season as good plants of Early Dwarf Erfurt and Walcheren for early planting as ever I had. The mistake is generally made in sowing too early, the first week in September being quite early enough. At no time must the plants be coddled. On the approach of the past severe weather the sides of the frame were banked up with litter and effectually protected on the top with litter and mats. Our plants never had daylight for a month. By uncovering gradually when the weather breaks the plants do not take the least harm. For summer use I rely on The Pearl and Walcheren. These are far less likely to button than Early London, which I note lately a correspondent recommended for summer use.—A. YOUNG.

**A profitable Kale.**—Of all green crops nothing seems to have stood the intense frost of the early part of the year so well as Asparagus Kale. A great proportion of the Scotch Kale has succumbed, but the Asparagus Kale to my surprise is safe almost to a plant. Offsets are now springing freely from the stems in all directions, and will furnish many tender dishes in a short time. If seed is sown in May, the plants put out on good firm land, and allowed plenty of room, they will grow strong and stocky, proving very useful late in the spring, when most of the other varieties are past. Indeed, if a good breadth is planted, plenty of tender delicious greens may be had till the earliest Cabbages come in. I do not think Asparagus Kale is known or grown so much as it deserves. J. CRAWFORD, *Coddington Hall, Newark.*

**Dwarf winter greens.**—Severe as has been the winter, it is pleasing to find that the dwarf winter greens have come through the trying ordeal the best. Asparagus Kale, Dwarf Green Curled Kale, and the dwarf plants of Cottager's Kale will do good service. Brussels Sprouts have been hard hit. On walking over our quarters after the snow had gone, I noticed that a few plants which had been bent over under the weight of snow, and so become quite covered, were quite fresh. Wood pigeons have done as much damage as the frost to our winter greens. Lately one or two correspondents have called attention to that excellent Cabbage Winnigstadt. I grow it as a winter Cabbage, sowing early in May.—A. YOUNG.

**Aids to early vegetable culture.**—I can quite bear out the remarks of Mr. Douglas (p. 184) as to the value of ground vineries, as they are termed, for forwarding such early vegetable crops as he mentions. For small gardens, where hotbeds and frames are an impossibility, there is nothing better for this purpose, and in larger gardens they are also valuable. The late Mr. D. Lumsden had great faith in protectors for forwarding early crops. He used long and narrow portable lights, each from 10 inches to 1 foot in width and 6 feet long. The sides were formed of two thin boards each about a foot in depth, and fixed together by cross-pieces. The tops inside were grooved. In these grooves were run sheets of glass. These were used for fixing over rows of early Lettuce, young Cauliflowers, French Beans, &c. The winter of 1879 was just as disastrous as this as regards green vegetables, and I remember these protectors were found of great value.—A. YOUNG.

**Small early Cauliflowers.**—Many now rely upon the small-heading dwarf varieties sown in January or the first week in February instead of sowing the somewhat larger sorts in autumn. Where this was done the seedlings will need attention as soon as the rough leaves are developed. If a frame elevated on a warm bed of leaves can be afforded, it will answer better than anything, the soil used being somewhat retentive. Where boxes are used, a few rough leaves will act as drainage, and thus the rooting depth be increased. As each handful of plants is removed from the seed pans, dust the roots and stems with flowers of sulphur; this will check the disease known as blacklegs. Plants in frames must be kept somewhat close for a week,

and then gradually aired until complete exposure is practicable. Those in the boxes should be placed in a warm greenhouse for a fortnight, and at the commencement of April placed in frames to be hardened off. Where a spare pit is at hand some may be pricked out into it, so that when large enough to remove to open quarters a percentage may be allowed to remain to produce some extra early heads.—J.

**Celery running to seed.**—At page 184 Mr. Douglas, in his notes on early vegetables, speaks of this running to seed when sown in boxes and raised in heat. For several years I have raised my early Celery in this way. I have only experienced this difficulty once in fifteen years, this being when the plants were allowed to remain in heat too long, and then pricked out into boxes, placing these in frames heated with manure. I sowed early enough, so that when the plants are well up they are removed into a cold house, and when strong enough pricked out into a cold frame till fit for removing into the trenches.—JOHN CROOK.

#### SCARCITY OF VEGETABLES.

IN the course of my rounds among amateurs and cottagers in Somersetshire I find a marked scarcity of vegetables other than Potatoes. Some few are able to vary the monotony with Carrots, Onions, and Parsnips, but far more are badly supplied with the two former, and owing to the frosts could not get at the latter. Turnips most of them grew, but had left them on the ground, only to be completely destroyed by frosts. Farmers had also apparently determined in their own mind that this was to have been a mild winter, and as a consequence large breadths of Swedish Turnips were left on the ground to be fed off at leisure. Of these the frosts have made a mess, and already the smell of decay is observable.

In the gardens all is desolation, scarcely a particle of green to be seen. Most of the Brussels Sprouts present the appearance of having been scorched to death; Borecole is only a few removes better, and Broccoli is completely destroyed. Old Cabbage stumps are all dead; young Cabbage plants if not killed are yet badly scorched, and if winter Spinach recovers from the effects of the frosts I shall be agreeably surprised. Leeks are very much damaged in places, but in some instances they have withstood the severe weather remarkably well. Celery, whether roughly protected or not, is as good as finished, the ridges being hard frozen through. When I have to speak of these occurrences, and which happen five nights in a week, the question is invariably asked, How could these difficulties have been obviated? It is a question not so difficult to answer as may at first sight appear. My contention is that we ought always to prepare for a severe winter. It may frequently happen that nothing approaching a very destructive frost happens when we are best prepared for it, but sooner or later we are caught napping, and then we wish we had made it a rule to always prepare for the worst. In the first place we ought to re-arrange our ideas as to what should be grown for winter and early spring use. Some of the most popular vegetables are really the least reliable, while others that deserve to stand higher in the estimation of the middle and working classes are not much grown, and that, too, in spite of their being thoroughly reliable. In the former class I would place Broccoli and Savoy. Every owner of a garden must have a few or many rows of Broccoli, but how often do they survive a sharp frost, or if they do survive, how many of them are eaten? More often than not whole beds of them are fit to cut at much about the same time. The variety that I

always advise those who have plenty of rough pits or fruit houses to grow most extensively is Veitch's Autumn Protecting, all the later plants being housed or stored in pits before severe frosts spoil them. It may be thought rank heresy to speak against Savoy Cabbage, but I hold them to be of less value than they are usually considered. Too often the bulk are unfit for use or are overgrown and bursting long before there is any real demand for them, and it is very rare that either Dwarf Green Curled and Drumhead are other than coarse, only the early Tom Thumb section and Dwarf Elm proving tender and mild in flavour. A severe frost ruins all that may be left at midwinter. Brussels Sprouts will stand a moderately severe frost as well as most vegetables, but when frosts are accompanied by biting easterly winds it seems to dry them up. Half-grown Borecole is all killed. Very strong stems well dotted with side shoots have survived in many places, and will yet do good service. If the Arctic Kales sent out by Sutton and Sons stand the strain on them this season as well as I have known them do severe frosts and cold winds in other winters, they ought to be grown everywhere. They are in two colours—purple and green—and belong to the same section as the ordinary Scotch or Green Curled. There are also two colours in the Asparagus Kale; both cook green. This, again, is a most reliable kind, and in some gardens I have been in are all there are alive. Presently they will push up fine succulent greens most freely, and the more they are gathered from the more they will spread and grow, the season extending to June. Those farmers who annually sow or plant large breadths of Thousand-headed Kale on the chance of their doing good service other than as cattle feed will have good cause, I should say, to congratulate themselves upon their perseverance. If within easy distance of a large town, and London in particular, they will be able to sell breadths of good produce at from £75 to £100 per acre. This has happened before and will again occasionally. Unfortunately we only eat Thousand-headed Kale when we cannot get anything else, and as a consequence very little of it is grown. What we want is something equally hardy and productive, but of superior quality when cooked. The Cottager's Kale is a step in the right direction, and since these notes were started I have come across a breadth in which at least one half the plants have stood the test remarkably well. With a return of milder weather these survivors will produce an abundance of greens that will be fully appreciated. This is not the first time by any means that Cottager's Kale has proved reliable, and those who have a fairly large household to supply ought always to grow a breadth of it. There may come a time when it would be acceptable in the dining-room occasionally as well as in the servants' hall, where it most often goes. Sprouting Broccoli, again, is not often seen in the dining-rooms of the wealthier classes, but it is by no means to be despised. Not infrequently it stands much better than the ordinary Broccoli, but I have seen none alive in my rounds. It is most unfortunate that so few comparatively appreciate the Leek. It is, as I have already pointed out, one of the most reliable winter vegetables we have, and I believe I am right in describing it as a delicately flavoured as well as very wholesome vegetable. Medicinal properties are also ascribed to it, and which are to a certain extent deserved.

Those who were sufficiently careful with some of the kinds of vegetables that can be stored or kept for winter use have long since realised what a boon these have proved or are proving.

Foremost among these I would place Runner Beans. Instead of letting these hang on the plants to spoil, they ought to be gathered as fast as fit for use, prepared for cooking, and then placed in large jars, each layer of sliced Beans being covered with a layer of salt. Stored in a cool, dry place, they keep admirably, and if well soaked in water twelve hours prior to cooking will taste nearly or quite as good as fresh gathered Beans. There is a great waste in that direction especially in years when Beans are exceptionally productive till very late in the season. Green Peas should also be stored rather than be allowed to spoil. Cottagers in many districts keep nearly all the Vegetable Marrows they grow for winter use, hanging them up in their kitchens. As a rule, though, they throw them away after they think they have kept them long enough. This time they are using them, and these stored Marrows are not bad eating. Farmers are a more short-sighted race than cottagers even. Many of them have tried the blanched tops of Swedish Turnips when these have been gathered from roots stored in heaps, and found them nearly equal to good Seakale, yet they never think of placing a quantity of roots in a cellar with a view to have early and numerous dishes of blanched shoots. This season very few of them have saved any of their roots, so that Swedish Turnips, commonly called "Swedes," cannot be bought to use as a vegetable, or for placing in cellars or other dark places to give blanched growths in quantity. We ought always to grow Seakale extensively. Even those who have few or no facilities for forcing, too, could yet forward Seakale in cellars, or even blanch the tops by heavily moulding over the crowns. Unblanched growths would be acceptable enough this season. Of other garden vegetables that ought to be more grown for winter use to form a dish occasionally or often, and not merely for flavouring soups, I would place Jerusalem Artichokes in the front. They are easily grown, quite hardy, or may be stored, and properly served would soon become popular where at present despised or not known. Chinese Artichokes again are very productive, easily kept, and good to eat. Onions ought to be largely served as a vegetable, and Carrots, Parsnips, and Turnips properly cooked are wholesome and good. All these with Salsafy and Scorzera for those who know what to do with them could always be stored in quantity, and when other vegetables are scarce would prove most acceptable. W. I.

**Sowing Broccoli too early.**—This is a matter of considerable importance, and one giving rise to comment each season as the time of sowing comes round. Quite recently I note that Mr. Crawford advises early sowing of such sorts as Baekhouse's, Snow's and Cooling's because they require a long season of growth. Possibly this may be quite true in Mr. Crawford's case, but in the southern and western counties such early sowing is unnecessary, particularly so in the case of Snow's Winter White. I used to sow this with others late in March and in April, but never had a useful crop until the sowing was deferred till May. I am cutting useful heads from plants lifted just previous to the first spell of sharp weather and laid in in a border in a house from which frost was excluded, and with such a dearth of green vegetables these are extremely valuable. Let outdoors they would have quickly succumbed, and the variety is one that always requires similar treatment, and the chances of obtaining matured heads is extremely doubtful, due as it is in early or midwinter. It is not usually convenient to have vacant ground at the time that Broccoli sown early would need to be either temporarily or permanently planted; and left crowded in the seed bed to await convenience

at once deprives them of the chance of making a stout starchy growth. Those who have been in the habit of sowing their Broccoli in March should this year make a point of making an additional one in April, and of Snow's variety in May, and the results will no doubt favour a repetition of the practice in future seasons—at least in the warmer counties. As I have not practised in the north I cannot say what the effects of late sowing in Broccoli might be, but perhaps some of your correspondents would favour us with their experience on that point. More than ordinary precaution against bird and insect pests need be taken when seeds are sown thus late, because the loss of these cannot well be made good by further sowing, unless it be under glass, and this is not advisable only in extreme cases.—W. S., *Wills*.

**Summer Cauliflowers.**—There will be such a very great and general scarcity of late Broccoli this summer through the late severe winter killing large breadths outright, that the value of the earliest summer Cauliflowers will be almost untold, and there will be a desire and, indeed, a necessity on the part of all vegetable growers to forward this crop so as to have it at the earliest possible date. It is not many years since the Early London was a standard sort and grown by almost everyone for early work, but of late so many varieties have been introduced that are both earlier and better, that its usefulness is becoming less appreciated year by year. Perhaps one of the best known of the select early Cauliflowers is Veitoh's Dwarf Foreing, as this has been in cultivation for some years, and if I was confined to one sort only for summer work this would claim first place. I grew this last year alongside Early London, and its superiority was not only found in its turning in more quickly, but in remaining fit for use so much longer than did the old one. It takes up less space, too, which in an extra early kind is of much value. Hand-lights, boxes and pots will all have to be requisitioned for hastening on the growth, coupled with shelter from threatening frost and cold winds, and those who have chosen one or more of the best early selections may, if the weather should soon become genial, make good to some extent the loss of the Broccoli crop. From pots they sooner become established than when planted out from boxes, unless they are allowed abundant space, so that the soil and roots can be lifted out in good sized squares. The plants should in any case receive no check.—W. S., *Road Ashton*.

**Globe Artichokes.**—The past winter has been a trying one for these plants, especially in low, wet districts where the soil is heavy and retentive. I have always found it a good plan in such situations to cover the ground about the roots with about a foot of fresh leaves in the autumn before frost sets in. At the first approach of severe weather the roots are covered with Braeken or other litter, which secures them against the most intense frost, and this is not removed till the weather is favourable in March. Where such covering has been applied it should now be removed, and the ground between the plants forked over to admit the light and sun to warm the soil. Young suckers will soon make their appearance, and when these are about 6 inches or 8 inches high the soil should be removed from round the plants in order that they may be taken off with a heel. To grow good Artichokes the ground must be well tilled: therefore the plot on which it is intended to plant the suckers should be previously trenched and liberally manured. I plant in rows 4 feet apart, allowing a distance of 3 feet between the plants. Three suckers are used to form a clump, and these are planted in a triangular manner 6 inches apart; in this manner more crowns are produced the first season. Though Artichokes may occupy the same ground for several years, I prefer to allow them to remain only two, for by planting a portion each season larger heads can be had in addition to a much longer supply; for whereas the old roots will produce an early crop, those planted in April, if due care be taken to water them till established, will continue to throw up flower-stalks

till quite late in the autumn. Last season I was able to cut some good heads as late as the middle of December. The plants are gross feeders, and on light land will need plenty of support while growing in the shape of liquid manure.—H. C. P.

**Turnips.**—If a little care is taken in preparing the site, a sowing of Turnips may now be made even in unfavourable gardens. Although the roots prefer a cool, moist bottom in mid-summer, yet at this date a south or west border is best, also a fairly light, warm soil. Some time ago I advised the preparation for this sowing by turning up and incorporating with the soil burnt refuse, sweepings of drives, and some rough leaf-mould, and in preference to spit manure the use of guano or fowls' manure. If, however, the ground has now to be prepared, the latter had better be withheld, or damage may be apprehended. Early Milan and White Dutch may be sown in equal quantities in shallow drills 1 foot apart, well firming the surface afterwards, and covering with fish netting to protect from birds. If when the seedlings show themselves any trace of Turnip fly appears, dust at once with wood ashes; indeed, an occasional sprinkling as a preventive is best. Where the hint was taken last month and Early Milan sown in a frame on a slight hotbed, growth will now be rapid. If any more thinning is needed let it be done without delay, as Turnips left too closely together very soon become leggy and fall about in all directions. If loose, press the seedlings into the soil gently with the finger and thumb. Keep moist by tepid waterings, administered on fine days. As soon as the bulbs are fairly formed give a good watering either with diluted farmyard water or guano water. Fly must also be watched for assiduously, as even in frames it will sometimes attack the crop. This sowing will afford capital Turnips very early, the flavour being good by reason of growth never being checked, as are sometimes early outdoor lots.—J.

**Late Queen Broccoli.**—The arctic weather that we have experienced this year has caused such a scarcity of vegetables in the kitchen garden as many of us never remember before: even curled Kale is killed, and all Broccoli, with the exception of one variety, viz., Late Queen, is destroyed. The sort named has withstood the great frost with comparatively little damage; the edges of the leaves are browned a little, but the centres are uninjured, and fully 90 per cent. will produce heads at the proper season. In another garden not far away there has been a greater loss amongst Late Queen, only about 50 per cent. remaining safe. In that case the grower did not sow until the end of April, as he does not believe in sowing earlier. Mine were sown by the middle of March, and I think that is the reason why the plants have stood so well, as the position is not sheltered and not so favourable in that respect as that of the grower referred to. No doubt the early sowing gives the plants a longer season of growth, which is better matured, and thus able to pass through greater cold safely than plants raised later. I have sown Late Queen in February when the soil was in excellent condition with satisfactory results, these never turning in before the usual time. It is possible that we may have an equally severe winter again, and I would suggest sowing the above variety now or immediately the soil is ready and transplanting, not less than 20 inches apart each way, as soon as the plants are large enough into fairly rich and firm soil.—W. G., *Ross, Hereford*.

**Sowing Peas and Beans.**—When should I sow Duke of Albany Pea and Mammoth Long-pod Broad Bean to come in on July 25?—F. P. K.  
\*.\* This question would be less difficult to answer if one could foretell the weather, which is the important factor. Another point deserving of attention is that Duke of Albany Pea is much sooner over than some kinds. It crops freely, but only lasts a short season. Most of the crop can be cleared in a fortnight, there being no succession of pods, as in Ne Plus Ultra. My advice to secure Peas for the date named is to sow twice, say the second week in April and again ten days

or a fortnight later. In this way if the weather is favourable those from the first sowing will be past their best, but the pods from the second sowing will be in perfection, and you will have two strings to your bow. So much depends upon position, soil, and culture, that precise dates cannot be given. Most growers, however, at that season allow twelve weeks with quick-podding varieties. If the soil is dry more time is required at the start, and for Peas to be at their best at the time named, there should be ample food at the roots with plenty of moisture. Two sowings of the Mammoth Long-pod Bean should be made. The plants are not over so quickly as those of Duke of Albany Pea, but the Beans soon get black, and if required for exhibition must be young, but fully grown. I would advise sowing this crop on a north border or on a cool site. Growth is rapid, and in dry soils the plants are soon infested with black fly, which checks growth. By making two sowings there is less chance of failure. The first should be made about the same time as advised for Peas generally, and should the season be favourable the second lot will be best. One lot may be sown on a warmer border, and there will be no fear of failure, as should the weather be hot the lot sown in April will provide the supply. In a warm garden the crop would come to maturity in about ten weeks from the time of sowing.—GROWER.

**Pea Dsisy.**—This sterling variety merits all that is said in its favour by Mr. Wythes (p. 185). I have sown it both in frames and outside, and for the former purpose it is a grand acquisition, as it forces admirably, and bears its large pods of deliciously-flavoured Peas in profusion. The fact of its originating from a cross between Stratagem and Culverwell's Giant Marrow, the produce re-crossed again with Stratagem, and also receiving the award of merit from the Royal Horticultural Society on at least two occasions, at once stamps it as one of the best Peas ever introduced.—W. G. C.

**A good winter Turnip.**—Many growers sow a quarter rather late to provide Turnip greens, and in mild winters rely upon small roots for spring supplies. The severe weather will have upset many calculations as regards the spring supply of green vegetables, and but few Turnips will be left to provide roots or green tops. With me all the Turnips have perished except the Chirk Castle Black Stone, the roots of which at this date (the middle of March) are sound and the tops quite green, the new growth pushing up freely. I have always prized this variety for winter use, but shall do so more now, as the tops next month will be invaluable. I think the hard black skin this variety possesses must protect it largely, as the bulbs are quite sound. I earthed up the rows late, as I find this a great protection. Some may object to the colour of the root of Chirk Castle Turnip, but when boiled the flesh is white and the quality excellent.—S. H. B.

**Notes on runner Beans.**—This vegetable is almost indispensable in most gardens, as it is not only delicious and highly productive, but serves admirably as a screen to hide any unsightly objects, or to prevent certain quarters of the garden being too much in view. For a number of years I have thus employed runner Beans—in fact, all the Beans that I require for the use of the family are so grown; and I believe each year the produce improves from sowing annually in the same places that are liberally manured for each crop. If the Beans are not too crowded and neatly staked, I question if anything else will act so well as a screen, or give such an ornamental appearance. There is now a great variety of Scarlet Runners of excellent merit, and for light, hot sandy soils I have found none to surpass Ne Plus Ultra. If immense pods are desired, Carter's Elephant or Carter's Jubilee Runners will meet the wishes of anyone, as both freely produce pods of great length, very straight, deep green in colour, and remarkably tender. The Czar is another very large sort that I have grown ever since its introduction, but this year it

will be superseded. If possible room should be found for the new climbing French Bean, as it is a fine acquisition. Treated in the same manner as Scarlet Runners, it will bear enormous crops of pods, and will continue cropping for a long season. Provided no pods are allowed to become old and form seed, daily supplies of tender Beans can be picked until frost cuts the plants down. Those gardeners who have to provide French Beans in quantity early and late in the season will find this variety a great boon.—W. G. C.

**Tomato Duke of York.**—I was glad to see Mr. G. Wythes' brief note on this new Tomato, and, with him, believe it will get popular. Last year I had a few plants sent me by a friend for trial, and they produced a very heavy crop of handsome fruit. So satisfactory was the variety for home consumption and also for market, that I am growing it much more extensively this year, and it will replace both Perfection and Ham Green. I may add that all my Tomatoes are planted in soil that has been thrown into heaps at the roadside by the roadmen when cleaning up the roads. In addition to decayed vegetable matter, this road soil contains some lime from the limestone used in metalling the roads, and Tomatoes seem to thoroughly enjoy this compost, as they make very short-jointed wood, with a profusion of fruit of a fine flavour. After the soil has been watered several times it becomes very firm, and this may account for the sturdy and prolific character of the plants. In the discussion on Mr. Collette's paper on "Diseases of Tomatoes" Mr. Douglas is reported to have stated that he never had disease in his Tomato houses. This he attributed to making the soil firm, never using any artificial manures, and maintaining a dry atmosphere during growth. Regarding the firm soil and dry atmosphere, I fully agree with Mr. Douglas, but my experience is the opposite as regards manures, as I have found natural manures promote disease, and artificial ones the reverse. If Mr. Douglas would oblige by stating how he manures, it would interest many readers.—W. G. C.

## CHRYSANTHEMUMS.

### CULTURAL NOTES ON CHRYSANTHEMUMS.

No time should be lost in transferring the plants from the cutting pots to larger ones directly the former are full of roots. No greater harm can happen to plants than allowing the roots to become matted together. The object should be to keep the plants steadily growing from the time roots are formed to the time when the blooms are developing. The advantage of inserting the cuttings singly in small pots will be apparent when the first potting takes place. Instead of their feeling a check by the removal of the soil from their roots, as is the case when several cuttings are placed in one pot, the singly potted cuttings are transferred to larger pots without the least check to their growth. For the first potting a large shift is not necessary, pots  $3\frac{1}{2}$  inches in diameter being large enough. From these the plants go into others  $5\frac{1}{2}$  inches, and finally into 9-inch ones. Experience has shown that it is a mistake to employ large pots for single plants. Not only do they occupy unnecessary space, but the plants cannot be so liberally fed as when in pots of the size named. Chrysanthemum roots have such a tendency to run straight to the outside of the soil, that when pots too large are employed in the early stages of growth the inner part of the soil in the pots is not nearly fully occupied. The compost for the first potting should be carefully prepared. Loam is the principal ingredient in the compost for potting at any stage. The condition of this must be closely studied. While loam will in some cases be fairly rich, that from other districts may be exceedingly poor in quality. Such material as the latter re-

quires supplementing with manure of some kind. If the plants are potted in this material without the addition of manure, the growth will be weakly and devoid of vigour.

If the stems of the plants do not swell freely in their infancy, they cannot do so freely afterwards. My experience is that Chrysanthemums cannot grow too freely from the commencement. To two parts of poor loam add one part of well-rotted horse manure, one part of leaf-soil, silver sand and crushed charcoal, according to the nature of the loam. If the soil is not in any way impregnated with lime or chalk, add pounded oyster shells liberally. For convenience in potting rub the soil through a half-inch sieve. About three crocks carefully laid at the bottom of each pot with the rougher parts of the compost over them will suffice for drainage. If the soil is moist, as it should be when used, no water will be required for two or three days, when a good soaking should be given. Return the plants to the shelf close to the glass in a cool house where frost is excluded. Here the plants should remain until the roots run through the soil to the sides of the pots when a cold frame stood in a sheltered sunny spot will suit them best. Care should be taken to stand the plants on a thick layer of coal ashes, with the double object of raising the plants close to the glass and providing efficient drainage.

E. MOLYNEUX.

### SHORT NOTES.—CHRYSANTHEMUMS.

**Chrysanthemum La Pelle Blonde.**—Where varieties with fragrant flowers are in request, and they are encouraged by some societies, this incurved kind is worthy of attention. The blush-white blooms are pleasing.

**Chrysanthemum Miss Cannell.**—It may not be generally known that this pure white, single-flowered Chrysanthemum is very fragrant, and where prizes are offered for blooms possessing scent, it is a good sort to cultivate.—E. M.

**Chrysanthemum M. Gruyer.**—This Japanese variety was introduced to commerce in 1874 by M. Calvat, and is at once a great improvement upon Vice-President Audignier. The colour of the flower is light rose, shaded and tipped white. The habit is dwarf, a point in its favour. The blooms are of full size.—E. M.

**Chrysanthemum Rev. W. E. Dewfrey.**—This single-flowered variety possesses more colour than the bulk of kinds in this section, and for that reason is worthy a place in ever so limited a collection of this section. The individual blooms are deep crimson, freely produced, and valuable for decoration either in a cut state or growing upon the plants.—E. M.

## GARDEN FLORA.

### PLATE 1008

#### SENECIO LAXIFOLIUS.

(WITH A COLOURED PLATE. \*)

This is one of the numerous shrubby composites which constitute so prominent a feature in the flora of New Zealand. It is a native of the Southern Island, and was first collected on the Nelson Mountains by Mr. H. H. Travers. From this locality it extends to the Canterbury Alps at elevations varying from 2500 feet to 5000 feet. It was originally described by Mr. J. Buchanan in the "Transactions of the New Zealand Institute," November, 1869. It is a woody, much-branched shrub of neat habit, the leaves being of a greyish colour above and covered beneath with a yellowish white down, as are also the young branches and petioles. The inflorescence is a loose corymb, the flower-heads being about 1 inch across

\* Drawn for THE GARDEN by Miss Tisdale in Mr. Gumbleton's garden at Belgrove, Queenstown, Ireland. Lithographed and printed by Guillaume Severeys.

and the ray florets golden yellow. The name *laxifolius* may have been given at first in mistake for *laxiflorus*, which would certainly be more appropriate to the open corymbs borne on slender peduncles than the present one is to the foliage. With regard to the affinities of the species, it was stated by Mr. Buchanan to be nearly related to *S. Monroii*, but according to Sir Joseph Hooker it is much more closely allied to *S. Greyi*, a species which he described in "The Flora of New Zealand" upwards of forty years ago. From *S. Greyi* it differs slightly in habit, but chiefly in its smaller leaves; in other respects it is so near to that species, that it may be considered a geographical form belonging to the Southern Island; whilst *S. Greyi* itself is confined to the Northern Island.

It was originally introduced to Kew, and is now grown there. A plant, however, on the rockery has succumbed during the past winter. It is probably better adapted to the climate of the south-western counties and the south of Ireland. It is one of the many rare plants which grow in Mr. Gumbleton's garden near Cork, and it is from his plant that the accompanying plate and that of the last volume of the *Botanical Magazine* have been prepared.—W. J. B.

— This pretty free-blooming and perfectly hardy New Zealand shrub came to me between two and three years ago from the Royal Gardens, Kew, under the name of *S. Greyi*. When it bloomed with me in the open border last summer I sent the flowers to Kew, where they had not yet seen them, and on examination and comparison with the specimens in the herbarium it was pronounced to be *S. laxifolius*. It appears from the letterpress attached to the plate in the *Botanical Magazine*, No. 7378 (which was also prepared from my specimen), that it is very near to *S. Greyi*, which it may be said to represent in the Southern Island of New Zealand, as it (*S. Greyi*) is only found in the Northern. It forms a low-growing tufty bush, and blooms freely in quite a small state on the tips of nearly every strong shoot. As it stood the severest frost I ever remember here when the thermometer fell to 3, or 29° of frost, on January 4-5, 1894, without receiving any injury therefrom and without any protection save that afforded by a light covering of snow, it may be pronounced to be perfectly hardy.—W. E. GUMBLETON.

**The yellow Aconite.**—There are few places where the yellow Aconite is seen in such perfection as at Coleby Hall, near Lincoln. The borders everywhere are one mass of yellow, every foot of ground covered. On bright days when millions of flowers are open the sight is gorgeous and not easily forgotten, especially at this dull time of the year when hardy flowers are far from plentiful.—J. R.

**Erica codonodes and the recent frost.**—When observing the enormous number of ornamental shrubs which have been either killed or disfigured by the recent severe weather, it is pleasing to come across shrubs that have not only escaped, but are looking green and bright and even flowering at this time of the year. Such a shrub is *Erica codonodes*, which is now in full bloom in an exposed position at Messrs. R. Veitch and Son's branch nursery at Exminster, Devon. Neither large nor small plants have suffered in the least, while close beside them *Pernettya mucronata* and other shrubs are cut to the ground. Another handsome Evergreen in the same nursery is *Choisya ternata*, which has been very little injured. Just a few of the outside leaves are nipped by the severe cold, but the flower-buds are uninjured and look very promising.—F. W. M.





SENECIO LAZARIFOLIUS



## THE WEEK'S WORK.

## FRUIT HOUSES.

**POT VINES FOR NEXT YEAR.**—Most growers doubtless are in a position to purchase their fruiting canes from large growers who make a speciality of producing canes for hard forcing, and thus save time and secure a good crop. Others are not so fortunate, and my remarks apply to those who are obliged to grow their own canes, often under considerable difficulties as regards space and labour to devote to the work. I still follow the well-known practice of potting on what are termed cut-backs, or last season struck Vines, and repotting now should be finished if the canes are intended for forcing early. Some growers pot direct into the fruiting pots, others give two pottings—one in February or March, another the middle of April, but so much depends upon the size of the plants. If they are strong and were potted last season into 8-inch pots, they will now shift readily into the fruiting size. If, on the other hand, they are at all small, it is well to give two pottings. As most growers are aware, the Vine in a young state does not root freely till the shoots are somewhat advanced in growth, so that it is well to repot after growth is well advanced just at the time they commence to push out new roots. This commences when the new shoots are from 4 inches to 6 inches long. When repotting at this stage the compost should be of a suitable temperature, the pots clean, well drained, and the work done quickly in a warm house so as to avoid cold draughts, potting firmly, and leaving a good space at the top to hold water. I never advise the use of decayed manure in the final potting, as food may be supplied in quantities as required from the surface. On the other hand, I do not advise a poor soil. Good turfy loam that has been stacked some months with such additions as Thomson's Vine manure and bone meal will make a good mixture and promote a short-jointed growth. Some good growers advise bones as drainage, but I prefer to use them in a fine state in the soil, as if given too much water at any time before the pots are full of roots the soil soon gets sour. After potting, if a little bottom heat can be given, it is well for the plants, but not imperative. Careful watering at the start is essential and a light place near the glass. Syringe twice daily, giving a temperature of 65° to 70° by day with a free circulation of air to promote a sturdy growth, and 5° to 10° lower temperature at night, according to the weather. Ample supplies of food will be needed when the pots are full of roots and top growth robust.

**VINES PLANTED OUT.**—Much the same practice as that detailed above applies to Vines planted in a narrow or restricted border, and this mode of culture is better in many respects, as those with limited space or labour may with advantage get early Grapes at less trouble than with pot culture. I find it most advantageous, but it may be thought, why grow cut-backs when young Vines struck in one season may be fruited the next either in pots or in small borders? The truth is, we do not get sufficient sun to ripen the wood—in fact our seasons are too uncertain, and I find much better results are obtained from Vines struck one year and planted out or potted on the next. The planting-out system is good where there are small pits or low houses, as with the latter many more plants can be grown. It is not necessary to give the canes all the space. We grow pot Figs and such plants as require the same temperature as well. The compost advised for pot Vines is the same, and a root space of 18 inches to 2 feet is given, but the latter may be wider or deeper according to the means of the cultivator, and it is equally necessary to have plenty of drainage. By planting out now with what may be termed planting canes, growth is rapid, and there is no difficulty in getting firm wood by the end of the summer months. The planting differs from potting in this respect, the old soil is shaken away and the roots spread out carefully; hence the necessity of

doing the work before the Vines have made much growth, and to prevent a check it is well to start the young plants in a medium temperature to get strong breaks, as then it is an easy matter to give the newly-planted Vines more warmth. From Vines planted early in April there is no difficulty in getting ripe fruit in a little more than twelve months from date of planting, and such Vines may be cropped more freely, as they colour better with more root space. In planting it is well to have a firm bed, ramming the soil as the work proceeds and giving the roots a little finer material than the main body of the bed of the soil. Young cultivators may require more information as to the advantages of bottom heat, and if possible to apply the same. It is a great gain both at the planting and again when starting the Vines for early forcing. Such heat is not required in the summer or when a free growth is secured—indeed does more harm than good, as with a small border the roots dry readily. Those who have not the means to give warmth at the time named will find they obtain equally as good results, though it may take a little longer time.

**MELONS IN POTS.**—Early plants require abundant food at each watering, and manure may be given in a liquid state, or as a surface dressing in the form of a fertiliser. Pot plants, being restricted to a small space, require more food and should not be allowed to get dry, as with the lower roots in a dry state swelling ceases, with the result the fruits lack both size and flavour. Syringing the crop will now be an important part of culture. The plants revel in heat and moisture; given these two latter, red spider will be absent, there will be less fear of cracking, and the growth being free there is less disease. Temperatures may now range high, the night being 70° and 10° higher by day, with air on the top ventilators, allowing a rise to 90° at closing time. There should be no fall in the bottom heat; this should be at least 80°; and if the bed is kept moist there will be less need of heavy syringing, as there will be constant vapour and a healthy growth. In recommending syringing or watering of these plants the grower must take into account the structure in which the plants are grown, as close, small or sunken houses do not dry so quickly as large exposed ones. When damping down it is well to do it thoroughly, but lightly; there is no need to cause the water to run down to the roots, a slight dewing over being sufficient. Pot-grown Melons may be had of superior flavour to those grown on manure, as there is a greater command of the roots. There should be no delay in supporting heavy fruits and it is not necessary to describe any plan, as most growers adopt the means they consider best, but the less pressure there is on the fruits the better. In pot plants there is less pinching of lateral growth than with others, but it is equally important to pinch out all laterals after the fruits are swelling freely, as such growths rob the fruit. Top-dressing will be necessary, and such aids as decayed manure soil and bone-meal may be freely given, leaving the collar of the plants as free as possible. In case the surface of the pots is covered, rough pieces of loam may be used at the outside or round the rims to hold the new soil. It will readily be seen when the fruits stop swelling, and at that period it is well to water sparingly with pure tepid water only, as at that time flavour must be considered. More air will be necessary, but it is not wise to reduce supplies too quickly, as a Melon ripened in this way is rarely first-rate.

**SUCCESSION AND FRAME MELONS.**—With more sun-heat there will be no difficulty in getting a free growth, and no matter in what way the plants are grown, good results may now be expected. Successions may be grown as cordons or in the old form with two or three main shoots from one plant, but I do not see any gain except in saving of plants at the start or in the case of any variety one is anxious to fill a large space with. Many good growers advocate poor, very hard soil and little food at the start. I do not think it necessary in the case of all varieties. Some, I admit, that grow much to leaf and are bad setters

may require starving, but I think a sound or heavy soil with such aids as wood ashes and a sprinkling of bone-meal or fertiliser gives the plants a start. Many fruits are not worth eating by being grown on a mass of decayed manure. With restricted root space there is no fear of the collapse of plants where plenty of heat can be given. With plants grown on the extension plan the points must be pinched when a few inches above the trellis and two or four shoots trained over it, these shoots later on pinched, when lateral growth will push out, showing plenty of female flowers. The grower should endeavour to get as many set at one time as possible to prevent one or two stray or early fruits taking the lead, only to be removed and cause a delay of ten days or more. I have a great liking for the cordon system; there is less difficulty in setting at one time. It is a certain way to obtain an early set, and though more plants are required, the cost is so small it need scarcely be mentioned. For this method sturdy growers should be selected and planted at 15 inches to 18 inches apart, the growths restricted to one till the plants reach well up the trellis, when they should be stopped, and the first two fruits set which show on the laterals. Less soil is required by cordon plants. I have secured very good fruits in 6 inch pots plunged in soil or fibre. Such plants require a lot of food, but there is no trouble with canker and the crop is quickly cleared. Melons in frames are much grown during the summer months by those who cannot devote a house to their culture and excellent fruits have been obtained with very little means at command. Some years ago I grew a lot of fruits in frames that had raised early Potatoes without bottom-heat of any kind, but the soil was made firm and the plants were close to the light. I also found it advantageous to place slates or tiles if there was much manure directly under the plants to prevent rooting through into the manure, the evil with frame Melons being gross growth and difficulties of setting. Many could grow good Melons during the summer without bottom-heat by planting strong sturdy plants and by careful attention to watering. Now is a good time to prepare plants for this purpose, and they are best raised in frames or near the glass from the start. For frame culture such kinds as Blenheim Orange, Gulton Orange, Beauty of Syon, and Hero of Lockinge have a good sturdy habit. By sowing now there will be strong plants at the end of the month, and they will be ready to plant at a time we get long days with plenty of sun-heat. The frames should be covered at night to maintain an even night temperature, and it is not well to have the foliage wet at night. Damping and watering should be done early in the afternoon, closing with plenty of sun-heat. Beds for bottom-heat should be prepared, using plenty of Oak or Beech leaves in the stable manure, the material prepared by turning and placing in heaps in readiness for use, and in making the bed the more solid it can be made the more gentle will be the heat. Soil should be placed in hillocks as the heat declines a few days before planting.

G. WYTHES.

## KITCHEN GARDEN.

**SPINACH.**—Earlier in the year I advised sowing this vegetable between the rows of dwarf early Peas on sunny borders. The same plan has frequently to be adopted between rows of later Peas owing to scarcity of ground. Where, however, ground is plentiful, it will be best from the present time to the end of the season to sow on separate plots. Tall branching sorts of Peas so shade Spinach that not only is growth drawn and weakly, but the quality likewise suffers proportionately. Allow 15 inches between the rows and thin out freely, as if left thick the leaves do not attain to half their normal size and the crop runs to seed much sooner; 9 inches from plant to plant is a good distance. The Victoria is an improvement on the ordinary round variety, at least for sowing now and for the next three months. If an east border can be reserved for sowings during June and July so much the

better, as at that date this crop does much better with less sun and more moisture. All growing crops of this vegetable will be improved by an occasional sprinkling of guano between the rows.

**FORCING ASPARAGUS.**—If any more roots grown specially for the purpose, or those from old beds which are to be done away with, have yet to be forced, this will now be an easy matter. Where frames on hotbeds have been employed for earlier batches, they may, as each lot is cleared out, be refilled with fresh roots without any renewal of the fermenting material, as closed lights and increased sun heat will soon start the crowns into growth. I find leaf-mould as good as anything for covering with, the fibrous rootlets working into it with great freedom. Planting completed, give a good soaking with warm water to settle the material, and keep the lights closed till growth commences, when plenty of air must be admitted to strengthen and flavour it. When an inch high, a watering with diluted farmyard liquid, this being repeated in a week's time, will be most helpful. This, however, should always be followed by another of clear water as a cleansing agent. If there are more roots than can be at one time accommodated in the frame covering the hotbed, place them in an ordinary cool frame, keeping it close for a time. Here they will come on very gradually, but still in advance of the earliest outside beds. Where permanent beds, constructed especially for forcing and heated by manure linings, are still in cutting, care must be taken that the litter placed over the crowns is not too dense, as owing to more favourable weather and increased heat the grass will be liable to run up weakly. If the beds are nicely covered it will suffice. Where outdoor beds have not yet been seen to the manure should at once be raked off, the surface pricked carefully over, a dressing of salt applied for the eradication of worms and slugs, this being followed by another of some approved fertiliser. On very light sandy soils it is a capital plan to cover the surface at the end of April with spent Mushroom manure. This conserves the moisture and keeps the roots in a cool and equal temperature. In carrying out the work care is needed, or the fork may destroy many of the earliest growths. Any new beds intended for planting in April may well have the surface stirred several times to dry and sweeten it.

**EARLY VEGETABLE MARROWS.**—In February I advised sowing a few seeds of an early variety to produce plants for yielding a few early Marrows in May and June. Ours are now in 6-inch pots and have been removed to an intermediate house, placed near the roof glass. I generally grow a few in pots 12 inches in diameter, and train the growths to a wire trellis close to the front lights of a span-roofed Peach house. This latter position is necessary, as unless the plants have a free circulation of fresh, dry air blowing through and around them when in flower, the pollen does not dry and a crop cannot be secured. If potted in good sound loam no stimulant will be required until the Marrows are swelling, when it may be given at every alternate watering. Pinching and regular thinning out of the foliage will likewise be necessary. The remainder of the plants are planted into a frame on a gentle warm bed of Oak leaves, with a foot of good friable soil free from animal manure. When planted they are kept somewhat close for a few days, afterwards admitting air in strict accordance with the weather. Too much moisture either at the roots or by the use of the syringe is not advisable, as early Marrows are very prone to canker and mildew, particularly in dull, sunless weather. Many err in allowing too much lateral growth, this being the greatest evil in Marrow culture, as not only are the plants weakened, but small, puny blossoms are formed which seldom set. I usually sow the second lot during the first week in April. These are grown in comfortable quarters and finally planted out in the frame from which the earliest Potatoes are taken. Moore's Cream, Sutton's Vegetable Marrow and Penny-byd are all excellent where the smaller varieties are preferred. Long White and Green Bush are amongst the most profitable of

the larger sorts. The Custard Marrows are better adapted for sowing later on, to be grown under cooler conditions as the summer advances. In sowing the seed use small pots, placing two seeds in each and finally reducing to the strongest plant. A temperature of 60° is suitable, and 55° after growth has commenced.

**PLANTING EARLY SEAKALE.**—In southern districts where Seakale is expected early in November a few rows of prepared thongs may now be planted, the main batches following about the middle of April. Some time ago I advised the preparation of a sunny plot for this special lot and the exclusion of strong manure, which, especially in rainy seasons, induces a prolonged growth and late maturity. If the divisions have been laid in warm, sandy soil and have had frame protection, new growth will have commenced. On this account careful handling will be necessary, as the least touch will snap the brittle shoots. A calm day is best for planting the sets, as draught soon injures the new fibres which have formed while the cuttings have been lying in soil. The best mode of planting is to use a blunt-pointed dibber, making a mark on the same, so that all the holes may be of the same depth. Sink the crowns just below the surface and finally cover each with half an inch of leaf mould. This will shield the growths from frost until somewhat hardened. If possible allow 2 feet between each row and 18 inches or 20 inches from set to set. In levelling the ground afterwards use a fork, as raking the surface is apt to damage the new growths. If forward enough, reduce the growths to three on each set before planting.

**EARLIEST CELERY.**—Forward boxes or pans sown early in February will now be in a fit state to prick out. Nothing answers better than a frame elevated on a shallow bed of leaves. All that is requisite is just a gentle warmth at the roots until the plants are established. Make the soil firm, water the day previous to planting, and keep the young seedlings covered with damp Moss while the work is proceeding, so that the fibrous roots do not suffer. For Sandringham and similar dwarf varieties a little less space between the plants than that usually allowed to main-crop kinds will suffice. A little leaf-mould incorporated with the soil will induce the formation of plenty of roots and ensure the plants lifting with a good ball at planting time. If ordinary boxes are used, they should on the completion of pricking out be removed to a warm sunny greenhouse or similar structure, where after fresh roots have been made abundance of air can be given. From this place they may at the commencement of May be removed to sheltered nooks and corners in the open air and protected a little at night when frosty.

**MAIN CROP.**—I never advise sowing this in heat. An ordinary frame facing south and in a sheltered position is the best. Employ good loamy soil and pass the same through a rough riddle to remove large lumps and stones. Let the seed-bed slope gently to the sun, sow thinly, firming the surface with the back of a spade, sprinkle with tepid water and keep the lights closed and cover with double mats at night. Under this treatment the seedlings will soon appear, when a little air must be admitted, increasing it as growth proceeds. Thinning must be done as soon as possible, as nothing tends to spoil Celery so much as crowding the plants. Celery brought on in this cool way seldom runs to seed prematurely and stands removal to the trenches without exhibiting any signs of distress. As regards varieties, it is well not to confine oneself to one or even two. If the season is indifferent and bolting takes place in autumn, the cultivator is placed in a dilemma. Early Rose, Standard-bearer, and Leicester Red, the latter a grand sort that stands a wet winter without decaying, also Wright's Grove Red, may all be grown with confidence, while as a white sort to dig in November and December Wright's Grove White is hard to beat. That capital old Celery Ivery's Nonsuch Pink is still one of the very best. Where Celeric is valued in the kitchen, it may now be sown under the same conditions as ordinary Celery, or

during the first or second week in April beneath hand-lights in fine soil on a sunny border.

**FORWARDING FRENCH BEANS.**—A batch of Syon House and Ne Plus Ultra may now be sown in 4½-inch pots in good holding soil and placed in a warm greenhouse temperature until germinated, when an ordinary frame will suit them best. These if exposed in all favourable weather and carefully watered will have a hardy constitution, and be suitable for transferring to a warm, sheltered corner of the kitchen garden about the third week in April. Of course, they will then need protection, especially at night, and if a rough framework can be erected over the plot and covered with mats or canvas at night, no fear of injury need be entertained. About five Beans should be left in each pot. When planting draw out good wide drills and of the same depth as the balls. Do not single the plants out, but merely part the balls gently and press the soil firmly round the roots. In addition to the night protection, Fir or Laurel boughs must be placed here and there for shelter.

**PLANTING BROAD BEANS.**—If the advice given in February was adopted and sufficient seed of the Early Mazagan sown in pots or boxes, they will have had sufficient time for hardening off, and may now be planted out in warm soil and duly screened as advised for French Beans. Plant sufficiently deep to prevent them from swaying to and fro, and if the soil is at all dry, water gently home. These will afford many profitable pickings before those sown in the open ground come into bearing.

**HORSERADISH.**—New plantations may now be made on deeply trenched, highly enriched ground. Pieces 8 inches or 9 inches long should be dibbled in 15 inches apart, the crowns being left just level with the soil.

**MINT.**—Where the forced supplies are becoming exhausted and that in the open beds is not yet fit for picking, a few clumps may be taken up and placed on the border of a cool Peach house, surrounding them with soil. In this situation Mint will quickly grow and a break in the supply be avoided.

**MUSTARD AND CRESS** may now be sown under hand-lights in warm borders. If several of these are used, inside sowings may now cease.

J. CRAWFORD.

## GARDEN SKETCHES.

### CHAPTER X.

With an eye made quiet by the power  
Of harmony and the deep power of joy  
We see into the life of things.

WORDSWORTH.

**SEPTEMBER 3.**—Now comes the robin's sweet autumn song. I believe the redbreast really sings all through the summer-time, but that in these calm autumn days, when the song of other birds has ceased, we notice it the more; and somehow there always seems a tone of sadness in the little tender flute-like notes as they break through the tranquil air. They seem to tell us that light and warmth, that leaves and blossoms are receding from us, and no longer tripping onward with the vernal hours. But the rich sense of fulness and completion is ever present in the autumn air, and this makes the robin's song at once precious, and yet sad to us. We have had our joy, even if it be now departing, and we gather up the fragrant sunlit hours to lie embalmed in our hearts, and be drawn forth on many a darkened day, for the beautiful alone is imperishable, and having once had birth, though no longer visible, yet lives on for ever in the soul.

One of the prettiest morning sights is the circling flight of pigeons above an old farmstead seen in the valley. Again and again, with an upward sweep, they pass above the dark Fir

trees with the sunshine caught on their outspread wings. A flash, and they are invisible, as they turn in flight, and with a downward curve seem almost to touch the old roof-top, but instead, aloft they soar again, wheeling round and round, till in a moment they drop together, tired out with the joy of motion. The swallows are already preparing for their southern flight. They are congregating together, sitting along the eaves of the dwelling-house, and then rushing together through the air with loud twitterings. On the chimney-tops sit the starlings, since their young are reared and their "labour of love" is ended for the year, and down the hollow space of a sunny morning comes a sweet, low sound, that mingles with one's last waking dream. The little rippling notes are very touching, not clear or joyous, but "tender and true," sweet contentment with a simple lot: like the bird itself, unnoticeable except when brought near, when the lovely iridescent hue becomes visible on its burnished breast. The hedgerows are now rich in fruitage. Sprays of the wild Rose trees covered with scarlet hews are mingled with the glistening Blackberries, fruits for the birds and for the children, bound together in the thorny hedge, while the tall uncut branches of the Thorn hold the store-house of ruddy berries in safe keeping for cheerless winter days, when the frost-bound earth yields nothing to the hungry seeking beaks.

SEPTEMBER 21.—In the rock garden *Pentstemon cordifolius* is at present one of the finest bits of colour. Its long trailing branches, covered with deep crimson flowers, are spread out on either side. Some are lying across the blue grass tufts of *Dianthus* and some have fallen among the low-growing *Campanulas* that are sending up fresh blossoms; but wherever they have tossed themselves to, they seem equally beautiful. The dry, hot summer has suited this plant to perfection; last season, being damp and much cooler, it did not flower at all. Another good dry weather plant is *Zauschneria californica*. Its blossoms are bright scarlet, small, but borne in great profusion. Its sucker-like roots increase rapidly, pushing out on every side, and the plant soon becomes a large tuft. It can be readily divided at any season. *Plumbago Larpente* is in a sunny nook, with cool peat mould at its root. This is its most beautiful stage when the foliage changes with shortening days to a deep crimson hue, while the sapphire flowers are still in perfection. The winter *Jessamine*, forced on by the warmth, has blossoms ere the leaves have fallen. This *Jessamine* and the *Schizostylis coccinea* flowering together make a fine autumn group. The lack of moisture has stunted the *Schizostylis*, for though in bloom its flowers are small. Two beautiful-tinted foliage plants—*Shortia galacifolia* and *Galax aphylla*—are now at their best. The latter has leaves of claret colour. It is planted in leaf mould and loam in a deep rock fissure, so that although in the sunniest aspects its roots have been kept cool and moist during the summer heat. *Shortia galacifolia* is in a shaded position, with peat and leaf mould mixed in the soil. It, too, has its roots under a stone, while the leaves form a crimson rosette, but as yet it has not bloomed with me. In both of these American plants the foliage is persistent. *Hypericum repens* is still in blossom, and the changeful foliage as it passes to red and russet-brown makes it even prettier in autumn than in spring.

The golden passing away of Solomon's Seal makes a pretty group in a shaded corner, along with the *Osmunda Fern* that is putting on its russet robe. Among these we have just

been planting *Daffodils* in clumps that will awake earlier, and roots of the *Star of Bethlehem* (*Ornithogalum umbellatum*) have been added to give a silver gleam as the *Daffodils* fade. After many failures, *Daphne cneorum* is at last contented with me. Planted deeply in peaty soil and some pieces of rock set around the base of the stem, its roots have been kept cool during the drought, and thus it has been able to form plenty of fresh shoots each ready for its rosy crown of blossom in spring-time. Once well started, the spreading growth can be layered all round, and the plant thus assisted to carpet the ground with its fragrant garlands of blossom. The *Shield Saxifrage* (*S. peltata*) has withered away without its usual autumn glow, but the *Megaseas* have borne the sunshine unharmed, and the border of them around the *Periwinkle* bank is full of bronze and crimson leafage. A clump of *Pulmonaria officinalis* torn to pieces in June, and planted under the shade of evergreens, has completely covered the ground with its large, silvery blotched leaves. It is too coarse growing for a choice border, but any wild bit of ground that it can take possession of is just the place for it, and very welcome are the clusters of pink blossom that begin to peep out with the first warm days of January. *Mignonette*, the flower of the desert, has been especially fine this summer. Nothing can be more delightful than the fragrance with which it now lades the still autumn air, and is wafted across the lawn with every passing breath of wind. It is needful to make a sowing in June as well as early spring, as it soon becomes exhausted through seed-bearing, and the later sowing comes in sweet and fresh for autumn days.

In the walled garden *Solanum jasminoides*, though cut down by winter frosts to within a foot of the ground, has re-climbed the wall and flung itself over to the other side, bringing with it trails of white clustered blossoms. This is usually a greenhouse plant, but, given a warm dry position, it seems quite contented out of doors. The *Myrtles* have suffered much from lack of moisture. They have simply refused to grow and are just in the same condition as in spring, but *Coronilla glauca* has become rampant and also flung out long arms of blossom. The *Magnolia* on the hottest spot of the wall has made good growth. These *Lily* trees that come to us from east and west, from China and Japan, from North America, and also from the Himalayas are impatient of removal, and take a long time to recover any root-disturbance. The best time for transplanting is in spring, just as growth begins. When moved in autumn, the fleshy roots if injured will lie rotting in the ground all winter. No garden sufficiently favourable in situation should be without one of these glorious trees, where the *Lilies* of the pool seem to have been uplifted from their peaceful home, where they could wake and sleep on the tranquil bosom of the shimmering water, to be set henceforth amid the warm and glossy leaves as perfume cups to scent the passing gale.

SEPTEMBER 29.—To-day friends have been with me who have recently come to live in a new house with surrounding land, asking how they should commence laying out the grounds and forming a garden. Now to those who are fortunate enough to have the planning of a garden for themselves, I would say let them not think that there are any hard-and-fast rules as to beds and borders, and laying out walks and terraces, and plots of Grass, and planting ornamental shrubs. The first thing in forming a garden is to take a general outlook, and see what the situation most readily and easily lends itself to, and then to set to work and do whatever seems fittest and best in keeping with the

extent of the grounds and with the dwelling-house itself, and what afterwards will give least trouble to keep in order. One general harmonious idea perceived without effort, and yet rendered interesting from the variety of detail, which gradually becomes evident to the eye, is what I think we should try to aim at. Walks are frequently so meandering, and flowers either so mixed or scattered, that the one precious thing a garden should ever have to offer us, rest for mind and spirit, is wanting. If it be possible, let us have in our garden a cool and shady walk for summer's hottest days and meditative hours; such a walk as in winter will afford us shelter from the cold blast, and where we will ever find the earliest *Primrose* of the year. An extent of well-kept Grass, be it large or be it small, should be always present in a garden, were it only for its delicious fragrance during summer-time when freshly mown, not to speak of the cool velvet carpet it forms to tread upon. Many narrow walks are a weariness, for of all places it is just in them that weeds most heartily rejoice, and much labour is wasted keeping them in order. And now as to the placing and arranging of plants. "Art in the garden" may appear to some a false phrase. They think that Nature is supreme, and that the less she is interfered with the better. In a sense this is no doubt true, and Nature when left to herself is ever beautiful, and nothing we can do can approach the magic touch by which she decks the hills and dales, clothing the mountain side with the sturdy Oak or dark Pine tree forest, and casting a mantle of purple around the more rugged heights, where only the close-glowing *Heather* can withstand the rude winter storms, while through the valleys soft pasturage runs and creeps into verdant plains.

Yes! Nature left alone works with a master hand, and if we would do any good work in the garden we must read in her grand, open book and listen to her teaching in the woods and dells and by the streamlet's bank. There she sows and plants; in the garden it is we who plant and sow. Therein lies the great difference, and here it is that "art" steps in and enters by the garden gate. For what is all art but the sense of and intense feeling for the beautiful, which, having passed through the human mind and receiving from the soul the divine or immortal touch, desires to create itself afresh by expression what may, in other words, be called the finer adjustment of speech or delineation to that which answers within? Now the true artist, when painting from Nature, does not sit down and copy every leaf on the tree before him and paint things just as they are, for art is never imitation. No; he becomes imbued with the beauty of the scene, and then he endeavours as best he can to tell us his sense of that beauty and not mere facts about Nature; and just in proportion to the truth of his portrayal of that sense does he become a good artist, and what he omits, or, rather, what he refrains from painting and merely suggests, will be a most important part of his picture: for this critical faculty of choice or selection is one of the subtlest in art. And herein I think is the explanation of the old Greek adage, that "the half is more than the whole" so contrary to the mathematical axiom that "the whole is greater than its part." A poet with this Greek feeling has sung to us the same thought—"Heard songs are sweet, but those unheard are sweeter still."

But what has all this to say to gardening may be naturally asked. Well, as the scattered flowers by the mossy bank, the woodland way, the hillside slope or rocky gorge, are pictures ready for the painter's brush, for the poet's song,

or the soft dreams of music, so, too, should our gardens be full of pictures, and our flowers placed and arranged in the most beautiful way we can imagine. One reason why the bedding-out system is now giving way to the finer growing and grouping of hardy plants is that it was so uninteresting. Every garden was a copy, more or less, of its neighbour. No garden expressed its owner's individual love for plants, either in choice of different flowers or in modes of growing or arranging them.

But the greatest defect of all in the bedding-out system was that you could see it all at once. Bed after bed of colour, row after row of different hue, all spread before the eye at the same moment, nothing withheld, nothing reserved.

Now, given a good border of old-fashioned flowers sufficiently wide for grouping and sufficiently long for variety, the surprises and change of flower pictures as one passes along, step by step, are truly astonishing; and the most delightful part is, that these flower pictures alter in form and colour every few weeks of the year, and that there is not a day in winter even, save when the ground is frozen or clad with snow, that one cannot gather a bunch of blossoms fair to see. The charm in a border like this is its mystery and expectancy; you cannot see it all at once. Many of its prettiest groupings are hidden for the moment and you come upon them slowly, only seeing at first far-off glints as you pass along.

To plant such a border effectually one ought to study Nature's grouping, and notice how when left alone the flowers form little colonies. This arises from the original plant shedding its seed around, so that fresh young plants are always rising up round the parents, which after a little time gradually exhaust the soil and perish, leaving their progeny moving slowly onwards. So we will find that a good bold group or two of one kind of plant will look much better than repeating the flower constantly at intervals throughout the garden. L. A. L.

(To be continued.)

## FLOWER GARDEN.

### ROCKETS.

THE accompanying illustration is a pretty reminder that the sweet old Rocket, a flower most of us have known from our earliest days, still has its admirers, although it is all too scarce in gardens generally. The time when Rockets bloom is a lovely one, for the early summer flowers are gay in great variety. Then especially are the simple roadside cottage plots so bright and sweet, when Rockets spring out from carpets of Pinks and Pansies and lift up their tall spikes to meet the drooping clusters of the Monthly or Maiden's Blush Rose. Happily this flower is much loved by cottagers and it will linger long among them, but in larger gardens we seek it in vain—it is neglected. This neglect arises not from lack of appreciation of its beauty and fragrance, but because, although in every respect a hardy plant, it does not go on growing and flowering year after year. It wants a little special attention, and this to be given at the right time. If left to grow and extend as most hardy things do, it resents such treatment and soon disappears. It should not be included among the true perennials, as it cannot be treated like them, and yet there are many pretty ways in which it could be grown. The essential thing is to always have young plants. Although occasionally a group may stand a second season, the safe way is to

always have a batch of young plants. These may be raised from cuttings, which root readily even in the open ground if shaded from bright sun, whilst another excellent method of keeping up a stock is to take up and divide the plants as soon as they have ceased to bloom, replanting them in another spot. In a well-managed garden there should be a reserve plot where stocks of this and kindred flowers requiring similar treatment might be raised. With such an aid much could be done to reduce the number of tender plants still put out in gardens and show the best flowers of each season in the most perfect way. There are several distinct forms of the double Rocket varying in colour from pure white to lilac, all of them pretty, sweetly scented, and worthy of the best care and culture.

**Arnebia echioides** (the Prophet Flower).—This interesting perennial may now be increased



Border with old double Rockets. Engraved for THE GARDEN from a photograph sent by Mr. S. W. Fitzherbert, Lanscombe House, Torquay.

by those desirous of adding to their present stock. In average winters by the end of February the plant has again started into growth. Like many of the rarer perennials, this cannot always be divided to advantage, so that in this instance root cuttings are best resorted to. It is true also that the plant comes from seed, but in seasons like that of 1894 seeds were not abundant; indeed, at the best of times the capsules only contain one seed each. These seeds are very hard and germinate slowly, so that it is best to employ both methods where a stock is desired. The chief advantage of root cuttings in such a case is that plants are more quickly obtained, as the growth of these root pieces may be hastened by placing them in a close warm greenhouse with a temperature of 50° or 60°. Lift one strong clump from the ground and secure as many roots as can be spared. Having cut into short lengths, place them around the inside of some medium-

sized pots and fill in the soil. The root cuttings should be buried their full length, leaving the upper surface uncovered. A good way of staying evaporation is to plunge the cutting pot in one two sizes larger, fill round with sand or cocoa-nut fibre, and cover with a piece of glass. Under these conditions growth will issue from the apex in a few weeks.—E. J.

**Primula obconica.**—I enclose with this note flowers of this Primula in which you will see a great difference. One, the smallest flowered, is the true type and the other two are variations, in which the flowers are much larger, and some of them show a dark carmine shaded eye which helps to make them attractive. Some time ago an idea was expressed in your pages that this Primula was being improved, and, on the face of it, it looks so, but I think we shall not get much further in this way, for though we always get a good proportion of these larger and more highly coloured flowers from each batch of seedlings, we cannot depend upon them, and there is little or no advance on the best flowers of former years. This is unfortunate, as they are just as free-flowering as the type and more attractive, but I find them very shy seed-bearers, and invariably have to go back to a plant that has borne flowers of the typical size and colour for most of the seed.—J. C. TALLACK.

**Daffodils in the Grass.**—The warm sunny days of last month brought the Daffodils up rapidly, and on the 25th the Tenby variety was blooming abundantly, tall and handsome as before. Two special tufts were mentioned last year as producing sixteen flowers each, the result of two bulbs planted eight years previously. This year one has eighteen flowers, the other sixteen. The Scotch Daffodil had a few flowers out at the same date, also *Narcissus nanus* and *N. minor*.

**Alstroemeria seed.**—About a year ago I sowed some seven or eight seeds of the above, which I had kept for several years past in an ordinary paper packet. A few weeks later several seedlings appeared, and, as I imagined, each seed had grown. In December, 1894, when sharing the plants with a neighbour I found that while the larger plants had grown and produced large fleshy tubers several inches long, three of the seeds had only just broken into growth. These latter, strangely enough, were singularly alike in the growth they had made, each with its tiny shoot only about a quarter of an inch long and a root quite half an inch in length. Thus in the first instance the seedlings appeared as quickly as could have been expected from new seeds, while the latter remained dormant for many months. Some seeds are by no means impaired in vitality by keeping them, and will germinate as quickly after ten years as though quite new. But to ensure this I think one

condition is necessary, namely, a comparatively air-tight vessel or package and uniform temperature.—E. J.

### CROCUSES AT LONG DITTON.

THE forms of *Crocus aureus* and *C. vernus* are the familiar kinds one sees in most gardens, but many other species embracing pretty shades of colour deserve extended cultivation. At the present time (March 13) they are a pretty feature in Messrs. Barr's nursery at Long Ditton, where the collection is a very large one. Owing to the prolonged frost having kept the winter-blooming species at rest, those which in an average winter open their flowers in January are now blooming along with those whose season is the present. *C. imperati*, for example, often flowers at midwinter, but is only now in full beauty. It is a most distinct Crocus when closed or open, the closed flowers being beautifully

feathered externally with dark purple, and when open in the sun they are of a clear mauve or lilac shade. *C. biflorus* varies in several pretty ways, and one most distinct form of it, called *estriatus*, has a fawn-coloured base, but when expanded is of a pale lavender hue. Another form of *biflorus*, named *Weldeni*, is deeply feathered with purple externally through the lower half of the flower and white when open. *C. biflorus Pestalozze*, an Italian form and the smallest of this lot, is wonderfully free blooming, each bulb throwing up a cluster of several flowers, which, though so minute, have a charming effect. In colour they are creamy white. *C. Balanæ* is a striking species, the buds when they first appear being of a deep maroon hue, shading to bronzy yellow as they expand. *C. Tommasinianus* in great quantity was wonderfully profuse in blossom, and a long bed of it alone produced a fine effect. The flowers are large, of a deep purple-blue externally, shading to the palest mauve as they expand. A kind so free and beautiful as this ought to be plentiful in our gardens. *C. chrysanthus*, a yellow-flowered species, shows much variation, and several most distinct forms have been selected, one with a large clear yellow flower exquisitely scented, others curiously feathered and stained with brown externally, whilst one named *albidus* is a pure cream-white with a few feathered markings at its base. The stigma of the flower in these varieties is almost scarlet. *C. Suterianus*, clear rich yellow; *C. stellaris*, bright yellow, with feathered lines of dark brown; and *C. Olivieri*, deep orange-yellow, with short rounded petals, are all distinct and desirable species.

Many of these Crocuses might be easily naturalised about our gardens, and being wild forms would show less deterioration than the named garden forms of *C. vernus*, which sometimes get weak when left to themselves. Little groups in choice spots, especially in the rock garden, would greatly add to the interest and beauty of the early days of spring. A. H.

#### FLOWER GARDEN NOTES.

**PROPAGATING.**—When penning the notes on propagating that appeared on page 198 I did not know that the recommendation to make a careful inspection of the stock, with the view to find substitutes for any portion of the same that might happen to be scarce, would be very applicable this year. In many places where provision for the accommodation of a large quantity of tender bedding stuff is not of the best heavy losses are chronicled, and the experience is not uncommon to find only a very few plants left of some particular variety of which a large quantity was required. Under such circumstances the gardener is fortunate who is able to fall back on a good batch of such herbaceous plants as are suitable for the formal garden, but, failing these, no time should be lost in seed sowing. It is full late for this work, but if a little heat is available, *Petunias*, *Verbenas*, *Phlox Drummondii*, *Golden Pyrethrum* and *Lobelias* will not be long coming up, and a little extra attention must be given to push them on as fast as possible from the seed-pans. The Sweet Tobacco again will come up and develop quickly into good plants if these are pricked out of the seed-pans as soon as they can be handled. Tuberous *Begonias* are likely to be in great request, and if a batch of seed was sown as advised in January, the seedlings will by this time be nice little plants, with the corms rapidly swelling. They will make a nice display in mixed beds if the certain dissimilarity in colour, height and habit inevitable in seedlings is not objected to. If a good stock of bedding *Tropeolums* is to hand, they can be propagated freely (good plants being very quickly obtained) to take the place of scarlet *Pelargoniums*. Much may also be effected with the best and most enduring of the annuals that can presently be sown out of doors where they are to remain, such as *Linum grandiflorum*, *Tagetes*, the new *Linaria* and the white and purple *Malope*. Here alone are five different shades of

colour that can be relied on to last well through the summer. A season like the present, when the loss of tender bedding stuff is causing considerable anxiety, should act as a strong incentive towards the increased cultivation of hardy plants. Given plenty of *Pinks*, *Carnations*, tufted *Pansies*, *Pentstemons*, *Pyrethrums*, *Antirrhinums*, *Spiræas*, herbaceous *Lobelias* and the best of the annuals, a garden can be made very bright without the trouble of filling houses and pits for eight or nine months with so-called bedding plants.

**CARNATIONS.**—These have come safely through the winter and are now fairly on the move; a few old plants left over from last year have succumbed, but in the case of young plants no loss has to be chronicled. I notice a statement made recently, in answer to a query as to which can be styled true border Carnations, that there was no distinction: all might be fairly classed as such. I do not quite follow the conclusion; it is certain that there is a wide difference in varieties both in constitution, in general habit, and in the freedom with which flower is produced, and only those that can be classed A 1 in this respect should, to my thinking, come under the heading of true border sorts. I know of a few novelties acquired occasionally, some by no means came up to these requirements: they were a long way behind the old standard varieties that have always given satisfaction. A feeling of envy is engendered at the contemplation of the photograph in THE GARDEN (March 23). A bed of this size and thoroughly well furnished must be very beautiful. It seems that individual blooms of *Ketton Rose* last longer than those of most varieties, but this may be due to the retention of the perfect flower right through to the decaying stage owing to the total absence of splitting. This variety is a little longer getting established than some of the more fleshy succulent sorts, and, together with *Countess of Paris*, is put down about a fortnight earlier than the main batch. Where *Carnation* beds are not already mulched, they will be all the better for a coating of spent *Mushroom* or peat moss manure, especially if a bright sun with drying winds is likely to prevail.

**WINDOW AND BALCONY BOXES.**—If materials for these are ready, they may be planted at any time, especially if an early display is expected and a certain amount of hardening off is required. *Cobæa scandens* sown in warmth in January is the very best climbing plant that can be grown, and may be planted at the back of boxes for that purpose. The free-flowering *Fuchsias*, *Heliotrope*, *Begonia semperflorens*, and *Chelsea Gem Pelargonium* are good plants for filling up the remainder of the box with, and as trailers use the Ivy-leaved *Pelargoniums*, the blue and white trailing *Campanula*, and *Ball of Fire Tropæolum*. Somewhat similar plants can be used for window boxes, and in addition *Petunias* that rank among the very best window box plants. If the variegation introduced in the *Pelargonium* is somewhat stiff and formal, a substitute may be found in the shape of the fine bright-foliaged *Eulalia japonica variegata*, that is one of the plants that can be put in almost any position, and that will form an admirable companion to the *Fuchsias*, *Begonias*, and *Heliotrope*. Plants intended for vases may be pushed along so as to secure good stocky stuff by the time it is safe to plant. I think the practice of using one class of plants for each vase except perhaps something at the extreme edge as a trailer is to be recommended. Thus *Fuchsias* of drooping habit, as *Mrs. Marshall*, *Beauty of Summer* and *Wave of Life*, make beautiful vase plants. Main shoots may be supported to make a full centre and then the plants allowed to grow as they like. So, too, if Ivy-leaf *Pelargoniums* are used a few stiff *Pea* twigs can be inserted that the plants may run up to a foot or rather more in height, when they may be left to their own devices, with the exception that as they ramble a little stopping may be necessary if the plants are likely to get ragged. Where things of more formal habit or upright growth, as *Pelargoniums* or *Marguerites*, are used outside, plants as trailers are absolutely essential, and those recommended for similar positions in

window and balcony boxes can be used, the green and golden forms of the well-known *Creeping Jenny* being also capital trailers. In the list of subjects of drooping habit recommended above I omitted to mention tuberous *Begonias*. Seedlings discarded from the beds because of this habit can always, provided they are free and vigorous, be saved for vase work, the very pendulous form, which is an objection in the one case, being a pleasing and welcome feature in the other.

**HARDY SHRUBS.**—In answer to Mr. Smith's stipulation that perfectly hardy as opposed to crippled shrubs should be prominently named as having come safely through the February of 1895, I may mention in addition to the common *Holly* the *Minorea Box* and *Osmanthus ilicifolius*. I fear, however, in a season like the present one can hardly help referring to many plants that have suffered from the fact that in many cases one has hardly ever experienced anything of the kind before. Many trees, the conifers especially, are so disfigured, that it is a question if they will ever recover. E. BURRELL.

Claremont.

**Iris sindjarensis.**—This, one of the newer additions to the *Iris* family, is clearly allied to *I. caucasica*, having the same characteristic growth and foliage. It is an early flowerer, the first flowers expanding only a little later than those of *I. reticulata*. In colour they are deep blue, shading to pale sky blue, and possess a delicate scent.

**Jacks.**—These are large-growing, robust, single *Carnations* hawked by the costermongers under this name, and finding a ready sale because of their gross and robust appearance. When they bloom they are, of course, disappointing, but they fill up the garden and they are cheap. A few days ago I saw at Feltham a piece of 50,000 *Jacks*, and it was computed that at least 38,000 of them were dead. Planted out as seedlings last summer in somewhat richly manured ground, they made a most robust growth, and by Christmas were soft and sappy, showing the presence in the leaves of the spot, a brown fungoid-like growth that destroys the foliage. Then came the intense frost, with the result above named. Many of the 12,000 presumed to be alive are so injured that they are not saleable. But the enormous demand for *Jacks* is shown by the fact that one grower alone grows quite 50,000.—R. D.

**Iris susiana.**—"R. D.'s" experiences (p. 209) with the above are not exceptional, special treatment being required for the successful culture of the *Cushion* (*Oncocyclus*) section of *Irises*, to which division *I. susiana* belongs. After flowering a period of absolute rest is necessary, which in this country during an ordinary summer it is impossible to ensure without artificial means. I have grown *Iris susiana* and flowered it fairly well in mounds of soil raised a few inches above the ground level. The soil, a sandy loam, was made quite firm and the rhizome planted an inch below the surface. After flowering had ceased, bell-glasses were placed over the plants until the commencement of October. These prevented any direct rain from coming in contact with the plants, and the mound being raised about 6 inches above the rest of the bed kept the soil about the roots from becoming waterlogged even in heavy rains, though doubtless at such times some amount of moisture rose from beneath. In 1888, after the dry summer of the preceding year, these *Irises* flowered very well; in other seasons they flowered fairly, thus showing that a dry state of the surrounding and underlying soil is necessary. The roots are perfectly hardy, and during the winter months do not need protection except from stagnant moisture, and this is prevented by the elevation at which they are planted. "R. D." must not expect success at the first, for all the *Cushion Irises* are very impatient of root-disturbance and may probably refuse to bloom the first year. I have never grown these *Irises* in pots, but there is no reason why "R. D." should not continue to try this method of culture, remem-

bering that he must roast the rhizomes during the summer and give plenty of water, it being understood that the drainage is good, while growth is taking place.—S. W. F.

## ORCHARD AND FRUIT GARDEN

### HARDY FRUIT PROSPECTS.

In this district things look anything but cheerful for an abundant fruit season. Strawberry plants are very bad indeed, as during the early part of February when we were having such cold nights the sun was bright during the daytime, which soon melted the little snow that fell, leaving the plants exposed to the full rigour of the winter's blasts. The consequence is there is not a green leaf left on many of the varieties, and some of them appear to be killed entirely. Although we have had a week of spring-like weather they do not show the least signs of life. The only plants that present anything like a respectable appearance are those which were planted out of small pots last August, and though the leaves of these are for the most part killed, the crowns seem plump and are swelling, thus showing the more vigorous the plants the better they were able to resist the cold. Plants, too, on warm borders that had only stood one winter seem to have succumbed to the severity of the weather. Such varieties as Anna de Rothschild, A. F. Barron, Scarlet Queen, and many of the newer kinds seem to have suffered the most. It will be interesting to learn how others have fared in this respect. At no time had we in this district more than 2 inches of snow, and that soon melted in the bright sun even though it was freezing in the shade. Some plants of Loxford Hall Seedling on a north border seem to have withstood the frost far better than those on the south borders and in the open quarters, as these were covered with snow till the thaw set in. Doubtless most things will have suffered more in the south than they have done in the midlands and farther north on account of the small quantity of snow that fell in the southern districts and the bright sun experienced during the daytime. Raspberries in the open quarters seem to have all their buds killed, especially on strong canes that were not thoroughly ripened. We have had this occur before when scarcely a bud on those in sunny positions made a start, the canes having to be cut back to induce them to push from the bottom buds, while those on a north border have grown away freely. It seems to me that the constant freezing and thawing have more effect on plants than a long-continued spell of frost. I have often noticed that vegetables on a south border have suffered more than those on the other side of the wall, for while the one remained during the continuation of the frost below freezing point, the other through the action of the sun became thawed every day. This season has been no exception in that respect, for a patch of Turnips in the open quarters was all killed, while those on a north border have withstood the frost remarkably well. In the north the weather is certainly not so hot so early in the season, for during the last few days the thermometer in the day has reached nearly 80° in the sun, while in the valley it has run down to near freezing point most nights. Such weather must have a telling effect on plant life. Reverting again to fruit, Gooseberry bushes have suffered much from the attack of small birds, which are very numerous in this district. Many are quite denuded of their buds and will have to make a fresh growth from the old

wood. It seems curious, but while the severe weather lasted they did not attempt to touch them; it is only since the frost went that they have made such sad havoc. Plums and Damsons have suffered much in the same way, scarce a flower-bud being left. Pears so far are looking well, but I fear both Apricots and Cherries have suffered somewhat through the severity of the weather, particularly the former, for on cold heavy land such as ours the trees make strong wood, which does not always become perfectly ripened, and when severe weather sets in the gross shoots are often killed. Figs that were not covered present a pitiable sight, for the young wood is entirely killed, so that a season's growth will have to be made before they recover themselves. H. C. P.

*Busted Park, Sussex.*

### APPLE WARNER'S SEEDLING.

THIS is a really good kind and one that should be grown in all gardens where late cooking varieties of the best quality are required. The value



*Apple Warner's Seedling. From a photograph sent by Mr. Norman Blake, Bedford.*

of late cooking Apples is often overlooked, and for private gardens, if some late kinds were substituted for those that come fit for use in the autumn, it would be a great gain, as we have a wealth of fruit at the season named and but a limited number in April or later. Although it may be thought we have abundance of imported fruits, I do not hesitate to affirm there are none equal in cooking qualities to the one named. The subject of this note must not be confounded with that excellent variety Warner's King, a kind which has got quite a dozen synonyms, showing at a glance how popular it is. I am not suffi-

ciently acquainted with its history to know whether the same raiser introduced Warner's Seedling also. Probably he did, as the growth of the two are much alike; but the one is an autumn fruit, being at its best in October and November; whereas the seedling keeps well late in the spring and is of splendid cooking quality. Indeed, Mr. Warner gives the seedling first place for quality and keeping over other kinds. This fruit first came under my notice at the great Apple congress held at Chiswick in October, 1883, Mr. Warner, of Broomfield, Chelmsford, showing this variety, which was much noted by fruit growers as a valuable culinary fruit, and being grown on poor loam on a wet, clay subsoil showed its free-growing qualities. The fruit in question was gathered too early to test its quality, as late Apples should be allowed to remain on the trees as long as possible. The fruits are large, of good shape, greenish yellow at this season, but in autumn when gathered of a much darker shade of green and slightly flushed with red, hard and solid, with a brisk flavour. They retain their acid flavour well into spring. The trees bear well in any form, excellent results having been obtained by grafting them on healthy stocks which produce worthless kinds. As the season of grafting is close at hand, those who require late fruits should give this a trial, as it is a splendid cropper. So far I have not seen the least sign of canker or disease in either bush or standard trees.

As regards cropping qualities, this variety much resembles Bramley's Seedling, and is equally meritorious, but Bramley's is quite distinct, being flatter in shape and having more colour. I name Bramley's Seedling, as I have seen it shown as Warner's, and *vice versa*, and the mistake is readily made with kinds similar in size, quality, and keeping properties. The better-known Warner's King, or, as it is often called, Nelson's Glory and in many counties D. T. Fish, is probably one of the most popular kitchen Apples grown. It is a great favourite with exhibitors, and at the Chiswick conference noted above was staged in 150 collections, the fruits in many cases being very fine. I feel sure that the newer seedling will prove equally valuable when its good keeping properties are considered, as, like Warner's King, it is equally prolific, does well in most soils and situations, and, taking into consideration its freedom from disease or canker, I should place it among the most useful kitchen Apples. Although we have so many varieties, there are none more worthy of a place even in a limited selection than the above.

G. WYTHES.

**Colour in Apples.**—My experience coincides with that of "E. M." as to the influence of iron in the soil on the colour of Apples. Our soil here has a large natural supply, and even the greenest varieties put on a little colour, but another factor not mentioned by "E. M." is wind. In 1891 we had much wind in this part, and the colour of all Apples was much deeper than usual. Such varieties as Bramley's Seedling, Ecklinville Seedling, Stirling Castle, and others were beautifully tinged with red—in fact, more highly coloured than in the hot, bright, sunny season of 1893. The stock also exercises an influence on the colour of the fruit. The most remarkable instance of this that I ever saw was at the Guildhall show held in London some years ago. While judging some nurserymen's collections of fruit, my colleagues and I came upon a basket of Apples named Warner's King of a lovely red colour which was so rich, that if it had not been for the size and true Warner's King shape we should have put it down as wrongly named. After the show was opened I sought out the exhibitor



(Mr. J. Watkins, Pomona Nurseries, Hereford) and inquired the cause of the extraordinary colour. The answer was, that having some trees of Red Bietingheimer that failed to crop well, he cut the head off and grafted with Warner's King with the result stated. The expert fruit grower, Mr. Crump, Madresfield Court Gardens, turns out something like 2000 trees per year for Lord Beauchamp's tenants, and he informed me a year or two ago that he selected pips from the most coloured Apples for raising stocks. Those who have seen the well-grown trees he turns out and the produce they yield will agree with me that no more highly coloured fruit is grown in this country, and as proving the influence of the stock, the same finely coloured fruit is produced on trees sent out to his lordship's tenants in different counties.—W. G. C.

**Pear Beurre d'Arenberg.**—I was glad to see the illustration at page 111 of that very excellent winter Pear Beurre d'Arenberg. At Holme Lacy the trees that succeeded the best were worked on the Pear stock and grown against a south wall. It was, therefore, something of a surprise to me to read in the descriptive note at page 111 that this Pear succeeds well whether worked on the Pear or Quince stock. What is other growers' experience with this Pear on the Quince stock? My experience is decidedly against it. Is it also a Pear for standard culture? It might bear freely, but the fruit would be very small, unless in exceptionally favourable districts. At Holme Lacy the fruits grew individually larger than generally seen. I remember the late Mr. Haycock was much impressed with them, and asked me to let him have some grafts. Against an east wall, although the tree fruited freely, the fruit never ripened, also being small.—A. YOUNG.

#### SEEDLING APRICOTS.

THE branches on seedling Apricots certainly do not commence dying away so soon as on trees raised from buds or grafts. At the same time there is a slight disadvantage in depending on seedlings, because they are a year or two longer in coming into bearing, and the only way to make the trees fruit early is to lift them every year and replant again in rather poor soil. This unfortunately prevents them making a strong growth, but one has to bear with this to secure an early fruiting tree. I do not wish to make it appear that as the trees get older some of the branches do not die away mysteriously as on grafted trees. What I wish to show is that seedlings hold out longer, and after they get well established they fruit as freely and retain a greater vigour than grafted plants. At the present time I have a fruiting tree of the sort known as Large Early. This tree is seven years old, and the branches reach to a height of 16 feet on a wall with a south aspect. A more vigorous or productive example no one could wish for, as at present there is not the slightest indication of any of the branches dying away. From previous experience in this direction I should not like to say that such a thing will not take place as the tree gets older.

Having dealt with seedling Apricots in two gardens where the character of the soil is quite opposite, one being badly drained, with a heavy subsoil, the other a fairly heavy loam 2 feet in depth resting on a bed of gravel, I feel quite convinced that the latter soil is best suited to the Apricot, as the plants fruit earlier, the leaves are larger and of a deeper green. To raise the plants I place the stones singly in 5-inch pots early in the spring and bring on the plants in a greenhouse temperature, planting them out close to a warm wall in July. At the end of the autumn the young plants are 18 inches to 2 feet high. In the spring I cut them down to within 9 inches of the

ground; the next year I select five of the best-placed shoots to form the groundwork of the tree. At the end of the second year's growth the trees are replanted. After this I never prune more than is necessary to secure sufficient growth to fill up the wall space, as I am satisfied the less Apricot trees are cut about the better. There is this difference, however, between seedling and grafted trees, that the former do better when root-pruned, and will even then make wonderfully vigorous growth when they are grown in a favourable soil. The Moor Park variety is the last I should think of increasing in this or any other way. At the same time I have found that seedling plants remain longer healthy than when they are obtained in the ordinary way. I have had budded plants lose nearly all their branches the first year after planting, but seedlings invariably go on much longer. The Moor Park is certainly the most disappointing in that way. So far as my experience has gone, the Peach Apricot and Large Early are the most reliable sorts to raise from seed.

J. C. CLARKE.

#### GRAFTING ORCHARD FRUIT TREES.

THE grafting season having again arrived, it may possibly be of interest, and also profitable to orchard owners, to remind them of the folly and waste of allowing young, vigorous, but worthless trees to keep on cumbering the ground, when they might be made to produce good crops of excellent fruit in a few years by grafting them with select sorts. There are thousands of poor useless Apple, Pear, and Plum trees that never bear a decent crop of fruit, and probably never will if permitted to go on as at present, and it is decidedly to the interests of the owner and the nation that all such trees be made to bear good fruit and prove a profitable investment to the planter or his heirs. In almost every part of the country a reliable man can be engaged to graft trees at a fixed wage per day, or so much each graft. In this district the rule is to pay a penny for each graft inserted. Grafting is such easy and simple work, that any man of ordinary intelligence can soon learn how to do it. Many practical men advise sawing off the limbs some little time prior to inserting the grafts, asserting that success is more assured thereby. This theory, I believe, is not founded on actual fact, as I have for years sawn limbs off, and grafted at once with scions cut at the same time from other trees near, rarely having a graft die. If grafting wax is employed, the work is performed more expeditiously, but, failing that, any good clay, mixed with about one-third of horse droppings, well mixing the whole together, will answer almost equally as well. Some tie Moss over the clay to prevent cracking in hot weather, but if the clay has been properly prepared, there is little danger of that occurring. The following are good Apples for grafting on standard trees, and may be depended upon to produce heavy crops of fruit valuable for home consumption or market. Kitchen: Bismarck, Bramley's Seedling, Warner's King, Beauty of Kent, Mère de Ménage, Winter Hawthornden, Striped Beaufin, New Bess Pool, Tower of Glamis, Maltster, Allen's Everlasting, Wormsley Pippin, Egremont Russet, Duke of Devonshire, and Lord Burghley.

There are hundreds of young Pear trees that only produce fruit for perry making that might with advantage be grafted with such varieties as Doyenné du Comice, Louise Bonne de Jersey, Beurre Hardy, Marie Louise d'Uccle, Souvenir du Congrès, Beurre Diel, Beurre d'Amanlis, Clapp's Favourite, Conseiller de la Cour, Gilgil, Catillac, and Verulam. The three last varieties are excellent for stewing, and as that useful class of Pears is becoming more in demand annually, it will pay to bestow more attention to it. In some places that fine late Plum, Pond's Seedling, makes splendid trees, but fails to bear freely. In such cases the heads should be sawn off and Belle

de Louvain put on; some trees worked in that way have never missed cropping profusely for some years. Other excellent Plums for standard trees are Monarch, Grand Duke, Cox's Emperor, Czar, and White Magnum Bonum. Occasional warnings have been given by experienced men as to the danger of having too many Victoria Plums in the country. This is, I think, true, but the varieties named will not clash with that prolific variety, being either a little earlier or later, frequently realising a higher price in the market for that reason.—W. G. C., in *Field*.

## WOODS AND FORESTS.

### WASTE IN TIMBER.

THE subject of waste in timber has been brought forcibly before me during my walks through large areas of woodland in various parts of the country during the summer months. At a time when rents are low, and some even at the vanishing point, it does seem strange that valuable timber is allowed to reach maturity, decay and die, when it might be converted into money. It is useless to advocate the teaching of forestry, to ask for Government grants, to open museums of forestry, and to compare our systems with those of France and Germany when landowners show themselves so indifferent to their own interests.

If farmers allowed their crops to grow and waste upon the ground they would be considered madmen, but year by year trees pass maturity, decay and die all around us without comment.

When large and beautiful Oaks die, which in themselves individually form a feature in the landscape, there is some excuse, for in decay and death there is a grandeur which we are sorry to part with, but this aesthetic view disappears when dealing with trees collectively. I have endeavoured to find a reason for this widespread loss, but have failed to find any but indifference or neglect, for there is no owner, however limited his interest may be in his estate, who may not fell and dispose of ripe timber. If the right does not exist directly, it may be obtained.

I have had occasion often to draw attention to this, and have never failed in carrying my point, to the welfare of the estate both directly and indirectly.

Take one example out of many. On a large estate not a hundred miles from London I have recently seen a Beech wood growing on a slope, the lower fringe upon the chalk outcrop. The trees upon this fringe were high and straight and contained on an average from 40 feet to 50 cubic feet of timber each. Many of these were dead, all not dead were dying, made evident by the yellow foliage in the month of July. In this one wood the loss could not have been less than £300, and the indirect loss arising from the overcrowding of others was also great. I could give numberless similar instances. It should not be forgotten that this direct money loss to the individual is but a trifling part of a national loss arising from a lack of reproduction. A dead tree is valueless, but it occupies as much space as a growing one, and the ground is idle and unproductive. The estate from which I have taken my illustration is an impecunious one, which makes the matter even more extraordinary.

If the teaching of commercial forestry could reach those who own the woodlands of the country, and in whose hands rests the welfare of the country in this respect, many of the financial difficulties under which such owners suffer would pass away. Our woodlands may be made to pay, and large areas now derelict and waste may be planted with a certainty of success, provided, of course, that such planting is done wisely. But it is manifest that this can only be achieved by reaping the produce when ripe.

This waste cannot be denied, because it is one

of those evils which cannot be hidden; therefore, who is to blame, the indifferent owner or the negligent agent?—CHAS. E. CURTIS, in *Times*.

**Prospects of forestry.**—It is a gratifying sign of the times that forestry, and even tree nomenclature, are being taken up by contemporaries whose arboricultural excursions never before extended beyond the "timber" wharves, and whose entire botanical vocabulary was limited to "hardwoods" and "Pine deals and battens." It used to be a standing joke, in fact, that the editor believed that the said deals and battens had an origin similar to that of bricks. This was altered when a real arboricultural society got at him and hauled him off to Scotch woods, where he was undeceived, and for the first time discovered the difference between a Scotch Fir and a Spruce. His own pages will show also that on that particular occasion an enterprising vendor of forest trees got hold of him, took him to his nursery, and persuaded him into the belief that the superiority of his trees consisted in the fact that their growth was matured, not by good culture and a good climate, but by the frequent storms of snow and sleet to which they were exposed. A Scotch paper made fun of this original "vegetable physiology;" but behold, is it not written in "Deals and Battens?" He is now under the tutelage of a recent and enthusiastic convert from Brown, who has got him as far as "A B." When he gets to "D," let us hope that he will cease to display the *Abies Douglasi* as "Douglas Pine" or *Pinus Douglasi*, and bring his lists of "Pines" and "Firs" into some degree of reasonable conformity with his botany.—TIMBER.

## NOTES OF THE WEEK.

***Asclepias curassavica*.**—Some fine sprays of this old stove plant bearing large clusters of red and yellow flowers have come to us from Mr. E. H. Woodall, St. Nicholas House, Scarborough. It is a pretty old plant now rarely seen.

**Plants in Shropshire.**—A note from my district (mid-Shropshire, East), as far as plants and trees are concerned, will perhaps interest others as much as their reports, if located, have interested me. Frost down to zero has injured all our so-called hardy evergreen trees except Box, *Skimmia japonica*, and the delightful *Osmanthus ilicifolius*, all four well exposed, but absolutely unharmed.—R. B.

**Bamboos and the frost.**—"E. M." is to be envied. My experience is very different. The intense frost and keen winds experienced in Berkshire have played havoc with my Bamboos, which hitherto had done fairly well in a partially sheltered border. Metake, perhaps, has not suffered so much as some (*e.g.*, *viridiglaucescens*, *violascens*, *Henonis* and *Scriptoria*). Brown, withered and scorched, they are anything but ornamental plants. Save one or two, they have escaped being killed, and that is all, and I am in doubt whether the canes should be left or cut down, in the hope of fresh canes being thrown up.—F. C., *Erleigh, Reading*.

**A good early pot Melon.**—Early Melons are much appreciated as they come in when there is a lack of choice fruits. I have found these early fruits are often better than those raised under more favourable conditions as to sowing and rapid growth of the plants. I have for some years advised pot culture for early fruits, and one can obtain good flavour with little difficulty when the root space is curtailed. For first cutting in May Ganton Orange is a splendid early variety. This was raised by Mr. Allan, and was given a first-class certificate on May 17, 1892, thus showing its earliness. There is no other variety I have grown more suitable for pot culture. The plant is of robust habit, sets freely, and the quality is all that one may desire. The fruits are deep scarlet, nearly round, slightly netted, and with a clear

golden skin and good depth of flesh for the size of fruits, there being a very small seed space.—G. WYTHES.

**Apple d'Arcy Spice.**—A friend brought us in from the country the other day half-a-dozen d'Arcy Spice from a tree he purchased of us. We think they are rather better specimens than those we sent you, so enclose you two of them. They are somewhat shrivelled from being kept too much exposed to the air, a common fault in storing.—SALTMARSH AND SON.

\* \* Shrivelled, but delicately flavoured and juicy Apples. Probably they would be not nearly so much shrivelled if they were kept in a cool, dark cellar. We think this excellent Apple deserving of much more attention, and we hope that Messrs. Saltmarsh will try it on various stocks, so as to get the most vigorous growth and the highest fertility.—ED.

**Orchids from Abergavenny.**—We have received from Mr. G. C. Williams, The Gardens, Trewyn, Pandy, near Abergavenny, a charming boxful of Orchids, showing that they are well grown in this garden, whilst the flowers represent excellent varieties in not a few instances. *Dendrobium Pierardi* is represented by a fine variety, and also the charming *D. Devonianum*. One of the best forms we have seen of *Odontoglossum Halli* was that of the flower sent, large and unusually rich in colour. *Oncidium Marshallianum*, the brilliantly coloured and large flowered *Mesopididium vulcanium grandiflorum*, a very fine form, *Oncidium Kramerii*, very rich in colour, and *Cypripedium caudatum* were also worthy of mention.

**Strawberry Auguste Nicaise.**—This variety cannot be recommended for flavour, as it is far behind British Queen in this respect, but is equally as good as many others. In these days of severe competition size and appearance are strong points, and a fine dish of Strawberries in April or May is always appreciated. To show the value of the above there is no difficulty when these fruits are sent to market in securing double the price for them. It may be urged that one cannot get the same number of fruits from the plants as with other kinds, but with ample attention to early runners and potting a much greater weight can be obtained if slow forcing and ample food be given, also a cool house when the fruits are ripe. The plants do not winter so well as some kinds and well repay for shelter under glass. In the open they lose all their foliage, and unless the pots are full of roots only finish two or three large fruits. Treated well there is no difficulty in finishing six to ten large fruits.—G. W. S.

**Magnolia Campbelli.**—This lovely Sikkim *Magnolia* is now in full flower for the first time, although it has been planted here for many years and reached the height of 25 feet. It is planted in a nook sheltered from the north and east winds. The flowers, like those of other *Magnolias*, are terminal, the points of all main branches and every side twig being crowned with one large, slightly sweet-scented flower, which is from 6 inches to 8 inches in diameter. The colour of the outside of the flower is dark rose or crimson and lighter inside, with petals of great substance. I attribute its free flowering to the abnormally dry summer here of 1894. I say here because most other parts of the British Isles were suffering from too much rain, whilst all crops here were suffering from the want of it.—W. O., *Fota, Cork*.

\* \* It was a great pleasure for us to see this beautiful flower and real novelty, a large bud and splendid expanded flower, like one of M. Latour-Marliac's great *Nymphaeas*, a beautiful soft rose colour.—ED.

**The Mezereon and its varieties.**—These are very beautiful just now in the Coombe Wood nurseries of Messrs. Veitch and Sons. It is a pity that such hardy and delightful dwarf shrubs are not more grown in gardens, even the common kind being little seen, and then more often in cottage gardens, where in the early spring days its purple-pink flowers fill the air with their sweet odour. A

very fine variety at Coombe Wood is *atro-purpurea*, this being far darker than the ordinary kind, the flowers a rich deep purple, strikingly brought out against the single white l'aphne. This one of the most beautiful shrubs we have. Its leafless shoots at this season are packed closely with large creamy white flowers, which are as fragrant as those of the ordinary kind. A bush of this would give pleasure at this season, especially after such a winter as we have just passed through. Groups of the Mezereon, its white variety in particular, might well be made—not only single plants here and there.

**Spring flowers at Birmingham.**—*Narcissus minor* and *N. minimus*, both easily grown *Daffodils*, are in flower now, a month later than last year. A pan of *Saxifraga Burseriana* showing over one hundred buds and blossoms is a beautiful sight. We grow it fully exposed, and although the pan has been buried in ice, it is not injured in the least. Many of the stems bear two flowers. *Saxifraga oppositifolia* and its white variety are very pretty and easily grown if kept watered in hot weather, and the same may be said of its other varieties. All the Snowdrops have been good, and *Scilla bifolia* improves very much with cultivation and is now much admired. Singularly, the white variety is more robust than the type, and a good patch is very pleasing. *Chionodoxa Lucillie* is very vigorous now; it has been established some years. The flowers vary a good deal in colour and shape.—H. J. SANDS, *Harborne*.

**The weather in West Herts.**—A moderately cold week for the time of year. On no day did the shade temperature at any time rise above 50°, and on the night preceding April 1 the exposed thermometer showed 8° of frost. During the week the temperature of the ground at 1 foot deep has fallen 1°, but only very slightly at the depth of 2 feet. March proved a warm spring month, the mean temperature being higher than in any March during the previous nine years with the exception of 1893 and 1894. Rain or snow fell on seventeen days, to the aggregate depth of rather more than 1½ inches, and was somewhat under the average for the month. With March ended the most important half of the "drainage year" of 1894-5, for after that month very little rain, as a rule, has a chance of descending sufficiently deep into the ground during the next six months to replenish the springs. It is therefore a fact to find that the total rainfall for the winter half of the present "drainage year" was about 1 inch in excess of the mean for that period. In March the duration of sunshine fell short of the average for the month, and was considerably less than in either of the two previous Marches. One striking feature of the past month was the absence of north-easterly winds. Indeed, for only forty-nine hours altogether did the wind come from any point between north and east.—E. M., *Berkhamsted*.

**Cutting Osiers.**—Will any reader kindly tell me how late I may cut Osiers without spoiling the summer's growth? I find it difficult to make purchasers cut them before the end of April, and I think this must cause a diminution of growth in the ensuing summer. The basket-makers like to cut the Osiers late, as they then peel easily, the sap being up.—J. H. W. THOMAS.

**Names of plants.**—*W. H. Cor.*—1, apparently a *Bertolonia*; 2, *Boronia megastigma*.—*F. M.*—*Dendrobium mobile*.

**Royal Horticultural Society.**—The next meeting of the R.H.S. will be held on Tuesday, April 9, in the Drill Hall, James Street, Victoria Street, Westminster. At 3 o'clock a paper on "Campanulas," by Mr. J. Wood, of Kirkstall, will be read.

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"This is an Art  
Which does mend Nature: change it rather; but  
THE ART ITSELF IS NATURE."—Shakespeare.

## ORCHIDS.

### CHYSIS.

THE few species belonging to this genus are useful free-flowering plants, and as their culture is of the easiest description, provided enough heat is at command, they are essentially amateurs' Orchids. They are strong-growing deciduous epiphytes, and may be grown in suspended pots or baskets. If in the latter, care is necessary to avoid scorching of the foliage by the sun, as although they like a clear light they are easily injured by bright sunshine under glass. The treatment will be similar in many respects to that given *Dendrobiums*, and during the winter more particularly they must be kept well up to the light, or but few flowers will be produced. These occur on short racemes and are developed along with the new growth. The early spring is the proper season to repot, and the compost should consist of equal parts of peat and Sphagnum. The drainage must be exceptionally good, quite two-thirds of the pots being filled and a layer of rough Moss placed over this. *Chysis* like fairly wide pots or baskets, as the roots are plentifully produced. When once they have obtained a hold of the compost they must never be allowed to get dry until the growth is complete. The plants should not be syringed overhead, as the water is very apt to collect in the heart of the young growths, causing them to decay. They are best accommodated in the East India house during the summer, but they should be rested in winter by keeping them drier at the roots and at the cool end of the Cattleya house.

*C. AUREA* comes from Venezuela, and requires less heat than the kinds mentioned below. The pseudo-bulbs are roundish, each about 8 inches in length, and bear light green lanceolate leaves. The flowers are yellow, marked with brownish crimson on the tips of the petals. This is a free-flowering and interesting Orchid, introduced in 1834.

*C. BRACTESCENS* is perhaps the most popular in the genus and deservedly appreciated. It grows rather more strongly than the preceding, otherwise the two are very similar in habit. The racemes bear from four to six large flowers, which, like all in the genus, are fleshy in texture. In the best forms the flowers are each  $2\frac{1}{2}$  inches across, pure white with the exception of the interior of the lip, which is blotched with yellow, and has several brownish crimson lines leading to the column. It was introduced from South America in 1840.

*C. CHELSONI* is a hybrid between *C. bractescens* and *C. levis*, raised by the Messrs. Veitch. The racemes have a more elegant appearance than those of the other kinds, and bear each from four to six flowers, the ground colour yellow, the sepals tipped with purple. The lip is whitish, also plentifully spotted with purple.

*C. LEVIS* is a strong-growing kind which, flowering at midsummer, bears racemes of yellow flowers spotted on the lip with crimson. The plant should be carefully treated while in bloom, and not allowed to remain in a very moist house, or the beautiful flowers will soon be spoiled. A native of Mexico, as also is

*C. LIMMINGHII*, another beautiful kind, and somewhat similar. The flowers are, however, nearly pure white, but tipped with purplish rose. It was introduced about forty years ago, and is among the best in the genus.

*C. UNDULATA* is said to be a native of Guatemala, but as it is extremely rare and apparently never found there by collectors, this statement is not to be relied on. The flowers are bright yellow, produced on long racemes, and the plants grow about 15 inches high. H. R.

### MILTANIA VEXILLARIA.

THE earliest plants of this superb Orchid are now in flower, and where there is a good number of plants they will keep up a fine display until mid-summer. The flowers of this well-known species have a peculiar charm, the simple form and delightful colouring making a change from the singular outline of many other kinds. It is undoubtedly this wondrous diversity of form and colour that has led to the great interest taken in the Orchid family, for probably no other race of plants can equal them in this particular. As a beautiful and free-flowering plant there are few Orchids to compare with *M. vexillaria* when in good condition. To grow it well it requires a good deal of attention in the matter of keeping insects in check, but otherwise its culture is by no means difficult. All practical cultivators will agree that to be successful with this species it must be kept in good health from the first, never allowing it to go back from want of attention either to the compost, to the moisture supply, or in any other particular, but always anticipating its wants. This rule, of course, holds good to some extent with all Orchids, but it is much easier to correct a mistake with many kinds than with the species under notice. Thrips are its greatest enemy, and if once these obtain a firm hold on the plants it is extremely difficult to eradicate them, the young shoots being crippled in the incipient stages and never growing with any freedom. For this reason it is advisable to carefully sponge the plants periodically, whether insects are seen about them or not, using a weak, tepid solution of soft soap. This makes the foliage distasteful to the insects and prevents any possible accumulation of dust or dirt. In the matter of compost, too, never wait until the pseudo-bulbs begin to decrease in size or till the peat has become a soddened, close mass before repotting, but give new compost as soon as the roots have become well matted in the pots, biennially or even annually if necessary. The best fibrous peat with all sand and earthy particles shaken out and clean, fresh Sphagnum Moss should be used, with a little charcoal or crocks broken to various sizes according to that of the pots used. These must be clean, drained about two-thirds of their depth, taking care to have a large piece over the hole with the convex side upwards, and smaller pieces near the top. A little rough Moss must be laid over this before placing the plant in position, with the leads well above the rim. Disturb the roots as little as possible, but avoid leaving anything behind likely to cause sourness. In bedding the compost arrange it so that the bases of the leading pseudo-bulbs are hardly buried, the new growths just resting upon the surface. I do not care to repot this Orchid in spring, a more suitable time being about September or just as the growth is well on the move, keeping the plants rather closer afterwards in order to avoid any check. It is not fastidious as to temperature, some growers succeeding with it in the cool house. The best place for it is, I believe, on the side stage of the Cattleya house close to a ventilator, as a free circulation of air is very desirable. In this direction, however, circumstances greatly alter cases, so that if growers are not successful with the plants in one place they should give them a trial in another, and when a suitable position has been found leave them there, attending carefully to their wants in other respects and at flowering time they will not regret the trouble taken. Experienced growers are in the habit of supplying weak liquid manure to this species when finishing its pseudo-bulbs, and the magnificent racemes of flower produced under these conditions are a convincing argument in favour of the practice. It must not be forgotten, however, that in other than experienced

hands this is dangerous and much better left alone altogether than overdone in the least, so that while not deprecating the use of stimulants I would advise amateurs and beginners to experiment with them at first on grosser growing Orchids.

*M. vexillaria* requires a good supply of moisture all through the season, varying it according to the weather and the state of growth, and during spring and summer the plants may frequently be dewed overhead with tepid water from the syringe, excepting of course after the blossoms show colour. There are many named varieties of this Orchid, the colour ranging from nearly pure white through varying tints of rose and purple. A typical flower would measure about 3 inches across the labellum, and this, in addition to the sepals and petals, is rosy pink with a few streaks of yellow leading to the column. *M. vexillaria* was described as an *Odontoglossum* by Professor Reichenbach, and is a native of New Grenada.

### THUNIAS.

THE season for repotting these charming Orchids having again arrived suggests a note on their culture. They are all free-growing and constant flowering Orchids of a deciduous habit of growth, blooming on terminal racemes from the apex of the pseudo-bulbs before the leaves fall. They are naturally epiphytes, but thrive under cultivation in a more substantial compost than most Orchids. Good fibrous loam and peat in equal proportions with a liberal admixture of chopped Sphagnum and very fine crocks will suit them well, a few nodules of charcoal about the size of horse beans being also serviceable in keeping the soil open. They should be grown in pots, which must be clean and filled to half their depth with drainage, covering this with the rougher parts of the compost. Pull the plants quite out of the old soil and shake it all away from about the roots, as they are strong feeders and usually exhaust the soil during the first season. A few of the old roots may be left to steady the plants a little, but they are of no further use, and most of them should be cut away. From three to six stems may be placed in each pot according to the size, which may range between 5 inches and 9 inches or even larger. The surface of the compost should be kept rather below the rims of the pots as in the ordinary way, the base of the pseudo-bulbs just resting on this. A small stake may be put to each to steady it until roots are produced. After potting place in the East India house and keep quite dry until roots are being emitted, when a little water will be required, increasing this as they run in the compost. When growing freely a plentiful supply will be needed, and when the pots are filled with roots, a little well-diluted soot water or other liquid manure may be given, but be sure the plants are moist at the roots before this is applied. *Thunias* delight in a hot and moist temperature with plenty of sunlight while making their growth, but after flowering they should be gradually dried off, no water being required in the depth of winter. They may be easily propagated as described recently in THE GARDEN by cutting the pseudo-bulbs into lengths as soon as they attain to maturity.

*T. ALBA* grows about 2 feet high and produces about a dozen flowers upon a semi-pendulous raceme. These have the sepals and petals pure white, the lip also white with faint purple markings. Introduced from India about 1840.

*T. BENSONI* is similar to the last-named in habit, but the flowers are magenta-purple with a yellow crest on the lip. This is a native of Moulmein, introduced in 1867.

*T. CANDIDISSIMA* comes from Burmah, and was introduced with an importation of *Dendrobiums*, first flowering with Sir Trevor Lawrence. This is similar in growth to *T. Marshalliana*, and the flowers are wholly pure white.

*T. MARSHALLIANA*.—This magnificent kind is more popular than any, and deservedly so, as no Orchid is more easily grown or bears more beautiful flowers. These are large, magenta with the

exception of an orange and yellow crest to the lip, which is exquisitely fringed at the edge. Several varieties of this species are in existence, including *ionophlebia*, *purpurata*, and *triloba*, these differing from the type chiefly in the disposition and tints of colour on the lip.

*T. VEITCHIANA* is a hybrid between *T. Marshalliana* and *T. Bensonii*, first exhibited in 1885. The flowers are white, the tips of the sepals and petals shaded with mauve. The lip is white with mauve and purple markings. R.

## KITCHEN GARDEN.

### PRACTICES IN POTATO CULTURE.

Customs that have long been established are not easily upset. Especially is this the case where the working classes in rural districts are concerned, these proving the most conservative of all. You may meet them in fair argument and ridicule their notions to your heart's content, only to feel that they will go away as firmly convinced as ever that they are right and you are wrong. At least, such is my experience, and I find there are many more similarly situated. Meetings of working men are more interested in Potato growing than any other subject that can be brought before them, and, curiously enough, what they appear to most need—viz., abundance of Potatoes—they make the most mistakes in producing. My contention is the working classes are not generally successful Potato growers, very few, comparatively, lifting anything like such heavy crops as they ought to do under spade cultivation. It is in the matter of planting tubers or sets that most mistakes occur. Too often next to nothing is thought about these till the heap stored in the previous autumn has been used from for a long time and very freely, scarcely enough being left to meet the exigencies of the situation. Not only does this usually mean a loss of vitality owing to premature sprouting, but it also necessarily entails much cutting up of tubers in order to have sufficient for planting. To the average cottager it seems sheer waste to plant whole tubers. When I tell them nothing under a 4-oz. set should be cut, and that a 3-oz. tuber is the smallest that ought to be planted, the assertion is made, and which is only too true, that the latter are frequently cut into three pieces and duly planted. The growth from such puny sets must of necessity be very weak, and who ever yet obtained a heavy crop of medium sized to large tubers from feeble haulm and stems? It has been proved beyond contradiction that the growth resulting from well-kept 3-oz. and rather heavier whole sets invariably gives the best results, and it is this size of tuber that ought always to be selected at lifting time, stored separately and thinly where they can be protected from severe frosts, and at other times exposed freely to light and cool air. It is only fair to add that very many gardeners are equally indifferent as to the preparation of their planting tubers, not bestirring themselves about them till it is too late. In some parts of Somerset the curious notion prevails that not only ought all Potato sets to be cut, but that also the cut sides should be placed uppermost in the drills. It is thought by some that the Potatoes do not bleed so much when the cut side is uppermost—at least they offer that as an excuse for the practice, but still more claim for the plan that it leads to the sprouts coming from underneath in a curve gaining a stronger foothold in the soil accordingly. I was under the impression that a strong sprout growing straight upwards gave by far the best results, but when whole villages follow such a time-honoured custom of planting cut side uppermost, what I have had to say about it will not influence them much.

It is also worthy of note how tenaciously cottagers cling to the practice of planting Potatoes thickly. In some districts the rows of all but the short-topped early varieties, or Ashleafs prin-

cially, are disposed 20 inches apart; in other places 22 inches are allowed, the distance apart in the drills varying from 8 inches to 10 inches apart. My advice has been very frequently given to the effect that it would pay them far better to be less free with their knives and to allow a medium-sized tuber the space usually given to three small cut sets, and to note the results. It is quite a waste of time to talk about planting in drills 3 feet apart unless the proposal is made to plant Brussels Sprouts or other winter crops between, but rows 30 inches apart and 12 inches between the sets do not scare some of them, and it may be this will prove a step in the right direction. As a matter of fact it is enough on ground frequently producing the same crops and not often manured. All those who have any difficulty in convincing working men that they overcrowd their rows ought to ask this question: Where are the best hills or single plants of Potatoes invariably to be found at lifting time? It is never disputed that these are at the ends of the rows or where the most light reaches the plants and air and warmth reach the roots, and when once men are set thinking in that direction the more intelligent of them begin to see "something in it." Having the whole of the ground heavily covered with haulm may seem encouraging or to presage a heavy crop, but this is too often overdone in gardens under the charge of professional gardeners as well as in cottagers' gardens, those responsible overlooking the fact that plants more thinly grown produce much the best crops of tubers, and this whether as regards weight, appearance, or quality.

As an extra inducement to owners of small gardens to allow more room for their Potatoes than heretofore, I usually advise them to resort to the very old practice of sowing a few Broad Beans very thinly along the rows as the planting is proceeding; not, however, to the extent of growing as many stalks of Beans as Potatoes, as this would mean the production of far more pods than are needed and the shading and weakening of the Potatoes. A Bean seed dropped in after every third Potato set is ample, and these duly moulded up with the Potato haulm will crop most abundantly and not interfere with the more important crop in the least. Out of this practice has grown another, and which also answers well. With the rows of erect sturdy-growing Potatoes, notably *Magnum Bonum* and the variety very hard to separate from the latter, and known as the *Bruce*, not less than 30 inches apart and the sets 12 inches apart in the rows, Peas may be grown in the rows with very surprising results. In this case a single plant is allowed to attach itself to each Potato plant, and this it does, cropping most satisfactorily, too, without any apparent detriment to the weight and quality of Potatoes eventually lifted. Naturally it is the medium height varieties that should be preferred for this method of double cropping, and if more seeds are sown than plants are needed, then the surplus has to be drawn out in due course. Arranging the rows of short-topped, early-maturing varieties not less than 3 feet apart, and after these are moulded up planting Brussels Sprouts, *Borecole*, autumn Broccoli, and autumn Cauliflowers between, is not largely practised in small gardens, the owners of the latter preferring rather to crop more closely with Potatoes and to plant the same classes of winter crops in succession to these. This is a decided mistake. They may obtain more Potatoes by closer cropping, but instead of the ground being waiting for the plants of other vegetables named, the plants are invariably waiting for the ground, and as a consequence are greatly hindered thereby, never really recovering from the check. It is the Ashleaf varieties, notably the old *Myatt's*, that I would still grow the most extensively with a view to intercropping; but if somewhat later maturing varieties are similarly planted, the lifting should take place directly the tubers are full sized, not waiting for the haulm to actually die down. In this way disease is often escaped and the lifting is done while yet this is possible without damaging the Brussels Sprouts

and such like. Soil previously drawn up to the Potatoes ought to be worked with a spade up to the stems of the other plants that are soon to cover the ground. If it is scarcely possible to grow too many Potatoes, then I would advise marking out intended sites for runner Beans and late Peas, cropping the spaces between with two or three rows of second early Potatoes. The latter may also be grown to within 2 feet or even less of intended rows of Vegetable Marrows and always in advance of the main crop of Leeks. Early Potatoes should precede Strawberries—are a good preparation for the latter, in fact. A ROVER.

### EARLY FRENCH BEANS.

All have not the convenience to force this vegetable in pots in forcing pits or hot houses, but others may secure an early supply by sowing in  $4\frac{1}{2}$ -inch pots in frames and then planting out on a warm border and protecting at night. For years I have adopted the plan advised, and there is no crop more profitable than these early dwarf Beans when a little trouble is taken in raising an early crop. Requiring early vegetables in quantity, a few years ago I tried every kind of Bean I could obtain, and sowed two rows of each on an early south border to test earliness, as a few days with this crop is of great importance, and out of at least a dozen kinds, *Mohawk*—or, as it is well named by some, *Six Weeks*—came in fit for table in advance of all others, so that I advise it for sowing in pots to plant out for first crop in the open. *Mohawk* possesses other advantages: it is very dwarf, with good habit, and a very free cropper, producing a nice sized pod and of good quality. I have by careful selection of the first podding plants got a very early variety, certainly larger in pod and with more top, but a good form for planting out of pots, as earliness is a gain in the right direction. Many may be able to sow a few dozen pots for planting out, and these sown now will come in in advance of those sown in the open by several weeks. The seed may be sown in any warm place, and when a few inches above the soil removed to cold frames, watering sparingly, planting out, after being hardened off in the open, at the end of April or early in May. At that date protection will be necessary, and it is well to plant on a warm border in front of a fruit house. Such plants can readily be protected by hand-glasses, mats, or other coverings, and will well repay for room occupied. If raised as advised and grown in cold frames the plants soon take to the soil, but there is no gain by raising in strong heat and allowing the plants to draw or fall over the sides of the pots. There should not be any check from the start, and there is no fear of collapse if the plants are not forced too hard. When planting, I find deep drills a great saving, as these shelter from cold winds, and it is a much better means of watering in dry weather. When planting it is advisable to make the plants firm. Shelter for a short time and give tepid water to settle the soil round the roots. G. WYTHES.

**Kales and the frost.**—Such seasons as we have just passed through will prove the value of the hardier varieties of Kales, as these are now just breaking away freely and will give a lot of useful greens. The Arctic Kales I noted the value of in an earlier note, and my remarks now more concern the old form of Cottager's and Asparagus or Buda Kales. Even the last-named varieties are hard hit, the tops or heads being crippled where the plants are tall or were raised early. Plants raised from seed sown early in May, specially for late greens, are little injured, and though small, will be invaluable for spring cutting, and as spring Cabbage will be late this year, those who have late Kales will find them more valuable than ever. By lifting a few and planting on a north border the plants will get a check and not run to flower so quickly. The other varieties, such as the *Chou de Russe*, *Ragged Jack*, and *Dwarf Curled Scotch*, are good. A portion of the head is injured, but the stems are sound and will furnish a lot of young shoots.—S. H. B.

## FLOWER GARDEN.

## SHIRLEY POPPIES.

THE conventional floral arrangements one generally sees, although composed most gracefully, bear the stamp of laboured production too plainly, and lack the simple expressive charm so characteristic of such arrangements as that here illustrated, in which the flowers show all their natural grace and form free from all trace of design. The essential thing always is to have vases or receptacles suitable in shape for the flowers that are to be placed in them, and beyond a pleasing foil of pretty leaves or grasses it is much the best to let flowers that can be gathered in plenty make their own picture in the house as they do in the garden. Of the many types of Poppies now grown few are of any use to cut for the house, but the Shirley Poppies are delightful and a noteworthy exception. Their long-stemmed flowers in lovely

found them to vary greatly both in foliage and flowers. On some plants the pitchers are rather long and narrow and quite devoid of coloured markings, while others are found with much shorter and broader pitchers and with markings varying from a mere dotting with chocolate colour to an entire covering of the leaf with reddish chocolate, it being also noticeable that those having the darkest foliage have the finest and most brightly-coloured flowers. It is also worthy of note that those plants that were protected to some extent from the winter sun by the dead grass and fallen leaves passed through the cold weather in much better condition than those that were fully exposed.

Under very similar conditions to those in which we find the *Sarracenia*s, that is, nestling among Sphagnum in decidedly boggy localities, we also find two or three very pretty little Sundews, *Drosera rotundifolia* being the most common species, while *D. longifolia* and *D. filiformis* are not so readily found, and are consequently of more interest to the collector. Among the many interesting bog plants found in some portions of New Jersey and adjoining States are also two particularly charming little Orchids, namely

tide-water. In such localities it appears in great masses from 4 feet to 6 feet high and bearing quantities of flowers that are frequently 6 inches in diameter.

Numerous variations of this species are found, the type having light rose-coloured flowers, while pure white is not uncommon, and a particularly handsome form is that having white flowers with a deep crimson eye. As this *Hibiscus* seeds very freely it becomes quite an easy matter to propagate these particular forms, some of which have thus been sent out as novelties by enterprising seedsmen.

W. H. TAPLIN.

*Philadelphia, Penn.*

## AN EXHIBITION OF LILIES.

WHILE agreeing generally with the opening remarks of "H. P." at page 107 on the above subject, I think that his concluding remark savours too much of despair. At no season of the year, it is true, would it be possible to produce anything like a representative display of Lilies, yet it is surprising what can be done by specialists when sufficient notice has been furnished of the date of exhibition, and with the additional advantage of northern as well as southern growers contributing. A much larger display of these flowers could be brought together in the early part of July than at the same date in August. It would, perhaps, exclude the *speciosum* and *auratum* sections, but it is quite possible that such an exhibition would be more generally useful and instructive without these groups, because they are more generally known and cultivated among amateurs than the majority. By forwarding in some instances and retarding in others a considerable number which could hardly be had in good condition a month later may be brought together in July. An exhibition in July should include *L. candidum* and its varieties, the well-known *L. Harrisii*, as well as the *longiflorum* of the Dutch growers; also *longiflorum* of Japan, which contains many of the variety *eximium* as well as other distinct forms. It would be quite easy to have these latter good for July or August by utilising the importations now coming to hand. By potting the dry bulbs at once and plunging them behind a north wall in cocoa-nut fibre they could be kept back considerably. The same remark applies to any dry bulbs of *clavatum* and others which flower near the time stated. Established pots of *speciosum album* and *Kraetzerei* could be had by July if placed at once in a greenhouse temperature, also the earliest importations of *auratum* if now well rooted and similarly treated. The Tiger Lilies may possibly require forwarding slightly, though not in the early stages, while *chalcidoneum* may need keeping back a little, unless the Scotch growers of this kind are later than the English growers. *L. Browni* would almost certainly be in good condition, as also some of the Martagons. Indeed, it would be difficult to speculate with any degree of certainty on what kinds may be brought together from all quarters. Scotland, for example, could supply species and forms of those earlier kinds which in Southern England may have long since passed out of bloom; while the Isle of Wight and Devon, to say nothing of growers in the Channel Islands, may send out specimens of many things as yet only in bud in other parts. Apart from the interest attaching to the exhibition itself, a series of practical papers would prove of great help to a very large number who now cultivate these beautiful plants, while a comparison of the varied experiences of growers in different localities would assuredly be of interest to many.

E. J.

*Spiræa astilboides floribunda*. — This, which was alluded to on p. 227 as one of the best of herbaceous *Spiræa*s, has made a considerable advance in favour within the last two or three years. Last season it received an award of merit from the floral committee of the Royal Horticultural Society on June 26, a large basket full of



A bowl of Shirley Poppies. From a photograph sent by Mr. J. Nash, Chapel Street, Berkhamsted.

shades of soft colour offer a fine variety and are free from objectionable odour. The flowers last longest when cut in the bud state, the buds opening perfectly in water. These Poppies are very handsome in the garden when well treated, but, in common with most annuals, they suffer from overcrowding. With abundant room to grow, the plants become nearly a yard in height and diameter, perfect bushes of profuse bloom.

## SOME AMERICAN HARDY PLANTS.

WHEN reading Mr. J. Wood's very interesting "Notes on Hardy Plants" in THE GARDEN of February 16 it seemed somewhat odd to find the hardiness of *Sarracenia purpurea* questioned, but as there doubtless are great differences in the climatic conditions of Yorkshire and the Eastern United States—even though the temperature of the latter may be lower during the winter—one can readily understand that such difficulties may arise in the establishing of this plant. I also agree with Mr. Wood that there are several varieties of *Sarracenia purpurea*, for I have examined a large number of plants growing wild in the swamps of New Jersey—where a temperature of zero is not extraordinary in the winter season—and have

*Arethusa bulbosa* and *Pogonia ophioglossoides*. The former is rather scarce, but pretty enough to be worthy of a hunt, its usually solitary flower of bright rose-purple being very attractive.

*Pogonia ophioglossoides* can sometimes be gathered freely, its sweetly scented flowers of rose colour, or sometimes nearly white, being about 1 inch in length, and there are frequently three or four flowers on a spike.

Still another hardy Orchid, of some value as a foliage plant, is the Rattlesnake Plantain or *Goodyera pubescens*, the white reticulated foliage of which is found in rather damp woods and usually in well-shaded spots. This is really a very pretty species, and I can well remember with what enthusiasm I carried home my first specimen of *G. pubescens*. I was a boy of about twelve years at the time, and having previously seen some *Anacochili* I felt convinced that I had discovered a new species of that family. My ideas were, however, soon corrected on that point, but I have always had a tender feeling for the plant since.

One of our most attractive hardy perennials during the middle and latter part of the summer is the Rose Mallow (*Hibiscus moscheutos*), which is usually found in perfection near the seashore or on the edges of brackish swamps adjacent to

fine plants being then shown. It is of Belgian origin, and is said to have originated as a seedling from a plant of *S. astilboides*. The flower panicles of the newer form are longer and more branched, whilst the individual blooms are whiter than those of the type. It seems to be even more amenable to forcing than *S. astilboides*, but not so readily as the common *S. japonica*.—H. P.

**Iris reticulata and Dog's-tooth Violets.**—Spring flowers this year are so late, and in consequence so doubly welcome, that perhaps one exaggerates their charm. Certainly they have never seemed better or brighter in my eyes. One group in particular on the spring rockwork is so much admired, that in case the combination is new to others, as it was to me, who has not been in England at this season for years, I put it down on paper for your benefit. Three years ago a good clump of *Iris reticulata* was planted in sandy loam and left to itself. The ground has become slightly covered with trailing plants, and some Dog's-tooth Violets, that no doubt had been there before, have made a perfect carpet of soft pink flowers and bronzy mottled leaves under the luxuriant mass of *Iris* blooms and spear-pointed leaves. The "shot silk" effect of the purple and gold on a pink and brown ground is one of the prettiest things I have ever seen, and in large quantities would be the loveliest effect possible. Spring *Leucocjums* and *Scilla bifolia* are pretty together, but for a combination I know nothing that can surpass *Iris reticulata* and Dog's-tooth Violets.—E. H. WOODALL, *Scarborough*.

#### NOVELTIES EXHIBITED AT THE HAARLEM FIFTH QUINQUENNIAL BULB SHOW.

SOME fine novelties among bulbs were exhibited at this show, which was held at Haarlem, the centre of the Dutch bulb-growing district. Among *Hyalanthus*, which were shown in considerable numbers, the following were conspicuous: *Isabella*, double, blush-white, deeper towards the centre, an immense and very closely-set spike, by far the largest among the double varieties; *La Grandesse*, double, white, a sport from the well known single pure white variety; *Kastanjeblom* (chestnut flower), a large spike of pyramidal form, the bells very large and of a pale flesh colour. In single varieties the following are distinct gains: *Dr. Windthorst*, blush-white, very large and long spike; *Potgieter*, pale blue, very large; *Cardinal Wiseman*, pale carmine-rose, with darker stripes; *Jacques*, immense spike, pale rose; *City of Haarlem*, fine yellow, large spike, closely set.

Tulips were shown in considerable numbers and of excellent quality. There were very few novelties, but the following comprise a selection of the best: *Emperor Alexander*, very double, bright red and yellow, showy; *Toreador*, double, deep red and orange, fine; *Prince of Orange*, deep orange, a glowing colour; this is a sport from the lilac-coloured variety *Violet Fonce*, and is a splendid kind; *Jeanne d'Arc*, white, pale rosy tinge, large and fine flower; *Lord Rosebery*, pale rose colour, fine flower; *Golden King*, pure golden yellow, a sport from the old variety *Tournefol*, and the best double yellow Tulip in cultivation; *La Parfaite*, bright red, yellow edged. These are all double varieties. One the best single varieties exhibited was *Queen of the Netherlands*, which has a very large, nicely shaped flower of a pale rose colour. *Visser* has a bold flower of a dark brown-red. *Kuypp*, white and red, and *Etoile Brillante*, bright scarlet, were good.

There were three groups of Tulip species shown, which proved a great attraction. *Tulipa Kaufmanniana* is a very early and showy Tulip, in bud much resembling some of the *Magnolias*, the body colour being white, yellowish towards the centre, and with a dash of red on the outside of the flower. *T. violacea*, a charming new Tulip, with bright magenta-red flowers, very early; *T. limifolia*, narrow leaved, bright scarlet flowers; *T. Batalini*, pure soft yellow, a small but pretty

flower, are all good early-flowering species. *Iris*es were shown in great variety by M. Van Tubergen, of Haarlem. There were not only all the early-flowering varieties, comprising such gems as *I. histrioides*, *I. Danfordia*, *I. reticulata* in variety, *I. Rosenbachiana* and *I. persica*, but in addition to these there were well-flowered examples of the *Korolkowi* group, *I. Kochi*, fine purple, many varieties of *I. hispanica*, and the choice *I. Boisierii*.

From the same exhibitor came a nice group of new *Lachenalias*, which received the first prize as the best new bulbous plants recently introduced into commerce. This group included the varieties *Cawston Gem*, a giant among *Lachenalias*, foliage broad and massive, the flower-spikes very long, and the bells large; *L. Ruby*, a very free-flowering, bright coloured form, which perhaps might be best described as an improved tricolor; and *L. Topaz*, pure waxy yellow, very fine. These were all figured in THE GARDEN for September 29, 1894. A second prize went to Messrs. Krelage and Son, of Haarlem, for *Arum Eggeri*, a plant somewhat in the style of *A. palestinum* (*sanctum*), but the spathe, instead of being of a uniform deep brown-red, is of a lighter shade and spotted. A very fine group of fifty pots of miscellaneous bulbous plants included a nicely flowered example of the white form of *Gladiolus byzantinus*, *Habranthus pratensis*, brilliant scarlet; *Camassia esculenta major*, a fine form of this well-known plant; *Scilla sibirica alba*, pure white, a promising novelty; *Anemone fulgens Leichtlini*, large flowers, with a white centre; and *Iris histrioides*, a brilliant pale blue, one of the best early *Iris*es. A VISITOR.

#### FLOWER GARDEN NOTES.

**DAFFODILS.**—When in 1894 we started cutting *Tenbys* in quantity by the end of January, being helped thereto by a good mulching of leaves through which the frost did not penetrate, and having no very cold weather to check the progress of foliage and flower-stems, it seemed as though the culture of Daffodils in pots was hardly necessary, but this opinion has to be considerably modified after the experience of the present year, when from the very same clumps the first flower was not open until March 23, and all anticipations of an early supply of outdoor blooms have ended in disappointment. It is not, I think, generally known as yet that for pot work Daffodils in variety yield for a comparatively small outlay a better and more enduring display than can be obtained from any other bulb, the lengthy season being naturally due to a careful selection of varieties. The choicer kinds cannot, of course, be included in such selections if the expenditure is limited; these, however, are not essential if a good blaze of colour and something to fill the vases are the principal consideration, and of the kinds enumerated under "good for forcing," bulbs are obtainable at from 5s. 6d. to 10s. 6d. per 1000. The kinds I have grown are two sorts of *Bulbocodium*, *obvallaris*, *Golden Spur*, *pallidus precox* and *princeps* in the trumpets, *Leedsii*, *Magog*, *Cynosure*, and *Stella* in the star section, *triandrus albus* and the single and double forms of *poeticus*. Two parts of friable loam to one of leaf-soil is a good potting mixture, a fairly good and holding compost being conducive to the production of stout, stocky foliage and fine flowers. The number of bulbs to be placed in pot or pan will, of course, depend on their individual size. It is advisable to have ready some nice fresh Moss and to cover the surface of pot or pan so soon as growth commences, so that the young foliage can push its way through the same. Where there is a demand for flowers for church decoration it is always advisable to have plenty of Daffodils for Easter; they are used largely in many places, and very pleasing arrangements can be made with them if they are put up with their own foliage in a light, natural manner. I have been led to the subject of forced Daffodils in these flower garden notes from the fact that the same bulbs having served one purpose may afterwards find a home on the borders of lawns,

in shrubberies or in the wild garden. Turned out of pots and planted for the time being in some odd corner, taking care, by the way, to label them correctly, that there is no confused mixture at planting time, they may, as the foliage on such bulbs naturally dies away quickly, be consigned to permanent quarters any time during the summer when convenient.

**POLYANTHUSES.**—With the advent of better weather flower buds are pushing up fast, and a very fair display will soon be obtained. A sharp look-out must be kept for sparrows, these mischievous rascals being sometimes answerable for the destruction of a lot of flower buds, especially if the weather is cold and bleak and succulent food is scarce. Black cotton will keep them away if placed at a slight distance above the plants, the rows or interlacing of cotton being fairly close together, so that the birds are baffled if they attempt to alight. If fish netting is available, this, with the aid of a few benders, may be placed over the beds until a fair amount of buds is on the point of expansion. On dry porous soils where beds of this favourite spring flower are fully exposed to the sun they should be well mulched with short manure. Unprotected beds in a hot dry spring are not likely to give a good display of flower. Specially good flowers may be marked for seed-saving if a fresh stock is required, and if sowing is contemplated this spring, April is a good time to get in the seed. I find a south-west or west border, the latter preferably, the best for the purpose on our light dry soil, and if the weather shows signs of a spell of drought it is a good plan to damp the drills before sowing and to shade slightly in the middle of the day until the seed has germinated. An essential feature towards securing a quick return of good plants is to transplant directly the seedlings can be handled to prevent the formation of a tap root of abnormal length. Failing the prospect of doing this at the right moment—that is, if the seedlings are to remain some time in the seed bed—the latter should be made very firm and solid before the seed is sown.

**COMMON FLOWERS.**—The fact that all outdoor flowers that beautify the garden in late winter and early spring are necessarily of the hardiest type is sufficient to create possibly a greater liking for them at this season. They have not, like herbaceous and bulbous plants, later on to chance comparison with tender subjects, but are emphatically alone in their glory. I was much interested the other day in a chance contrast that will be bad to beat all through the season. A batch of *Sedum Lydium* had to come away from a certain portion of the garden last autumn and occasional clumps were made in the front of herbaceous borders. I did not remember at the time that the same ground was always occupied by *Crocus*. Such, however, was the case, and the bulbs, mostly in the dark and light blue shades, pushed up through the carpet of *Stonecrop*, and the bright colour on the intense green of the *Sedum* was a very pleasing sight. *Hepaticas* are beautiful just at present, a thoroughly good early old English flower that is not half enough grown. They are not at home in all situations, and are never likely to be satisfactory if planted right out in the open border, especially if that border is much exposed and the soil is a bit dry and light. The best lot of *Hepaticas* I remember to have seen was growing on a low rockery that had been tastefully made on a narrow stretch of lawn in a sheltered spot not far from a running stream. The soil, naturally a good loam, had been deeply dug and well prepared. The old double red and double blue varieties make charming button-hole flowers, anything in this way being at times a relief from the more elaborate arrangements obtained from stove and greenhouse. Given a favourable time, we shall soon welcome the first flowers of the alpine *Phloxes*, and the green carpet will quickly be changed into sheets of white, mauve, pink, rose, and lilac. There is a strange difference in the requirements of these *Phloxes* and the *Hepaticas*, for whereas the latter, as mentioned above, like a sheltered, moist, and shady spot and need a bit of good soil,

the Phloxes will be seen quite at their best on dry, poor borders, banks, or slopes. Another early-flowering plant that adapts itself readily to similar situations is the perennial Candytuft; indeed, this seems to flower with the greatest profusion on poor borders.

NATURALISATION OF HARDY FLOWERS.—It may not be out of place to refer thus early in the season to this subject, and to suggest the advisability of keeping a sharp watch on all the different species with which experiments have been made with the view to ascertain, both from their habit of growth and from the profusion or scantiness with which flower is produced, whether they are in congenial quarters and are likely to be a permanent success. This latter is essential in

of varieties of similar species with which one has to deal.

E. BURDELL.

Claremont.

TREES AND SHRUBS.

THE VINES.

(VITIS.)

THERE is, perhaps, no feature in the adornment of our gardens and woodlands where the gardener's art can be more effectively displayed than in the use of climbing shrubs. There is a peculiar charm about these plants which no

to a less degree only in Asia Minor. Except in the case of the Hop-leaved Vine hereafter mentioned, it is not for the beauty of the fruit that the wild types of *Vitis* are grown in these islands. It is their luxuriant habit, surpassing grace, and wealth of handsome foliage, which in several instances affords the richest of autumnal colours—yellows, purples, and crimsons—that constitute their great value.

Some thirty species are at present in cultivation that can be grown out of doors in the southern parts of this country, a very small proportion, of course, of the total number of species known, most of which are semi or purely tropical. They are all of climbing or rambling habit, and their variety in foliage and different degrees of vigour in growth enable one or other of them to be employed for almost every purpose to which climbers may be put. Whilst some are especially valuable for the walls of houses, others may be used for covering arbours, pergolas, the pillars of verandahs, old tree stumps, or sloping banks. In the case of the stronger, taller-growing species they may be made to clamber over living trees. Little need be said on the matter of cultivation. They are moisture-loving plants, and require liberal treatment at the root. Where space is limited they can be kept at any required size by means of pruning, but the most luxuriant effects are, of course, obtained where they can ramble without let or hindrance. Where they are intended to spread over living trees, they should always be planted sufficiently far away from the trunk to allow rain and light to reach them. Success, too, will be better assured by giving them a pocket of good rich soil to start in. In the majority of the species increase can be accomplished by means of cuttings or by single "eyes," treated like those of the common Grape Vine. Some, however, are very obdurate and can only be increased by means of seeds. Layering will occasionally prove successful with those that refuse to root from cuttings. Grafting should only be resorted to as a last resource.

In the following enumeration of species the nomenclature adopted is that of the recently published "List of Hardy Trees and Shrubs" at Kew. The generic titles of *Ampelopsis* and *Cissus* are therefore sunk under *Vitis*.

NORTH AMERICAN.

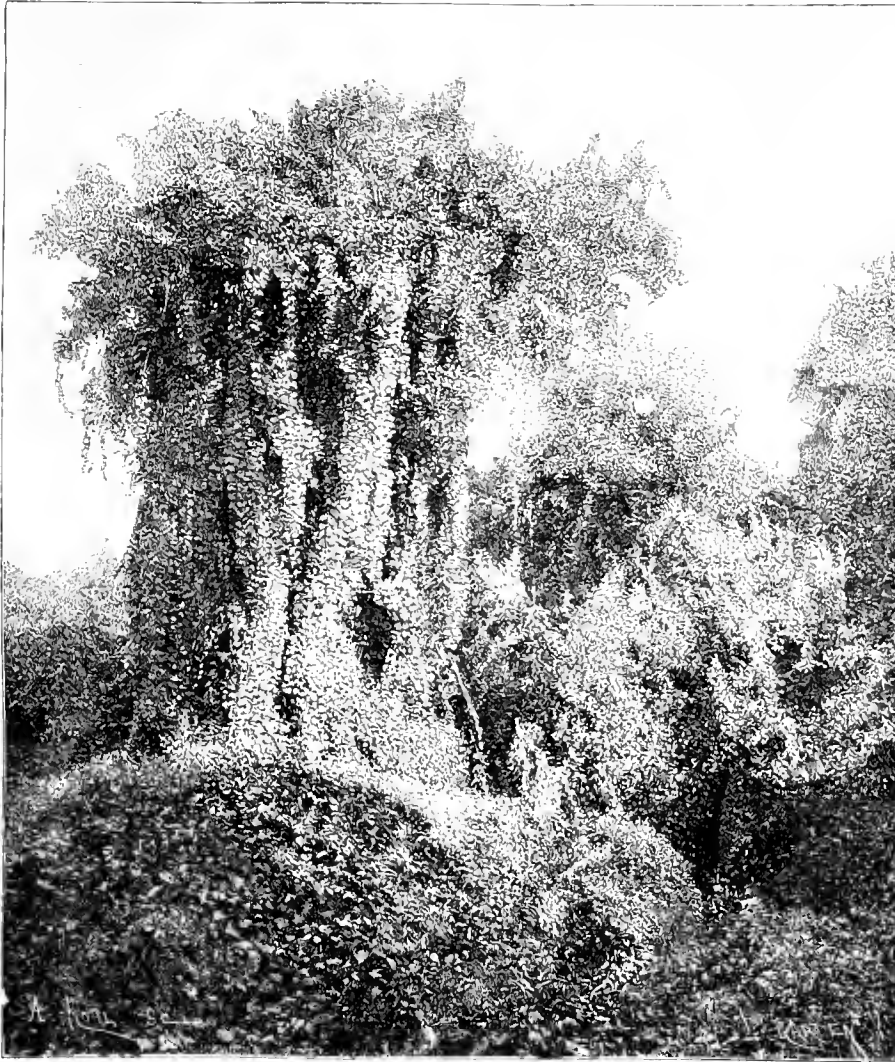
- |                    |                                    |
|--------------------|------------------------------------|
| <i>V.estivalis</i> | <i>V.quinquefolia</i> (Ampelopsis) |
| <i>arborea</i>     | q. var. <i>inera</i>               |
| <i>arizonica</i>   | q. var. <i>hirsuta</i>             |
| <i>Berlandieri</i> | q. var. <i>muralis</i>             |
| <i>californica</i> | <i>riparia</i>                     |
| <i>candicans</i>   | r. var. <i>palmata</i>             |
| <i>Champini</i>    | <i>rupestris</i>                   |
| <i>cinerea</i>     | <i>striata</i> (Cissus)            |
| <i>cordifolia</i>  | <i>vulpina</i>                     |
| <i>Labrusca</i>    |                                    |

ASIATIC.

- |                                |                                   |
|--------------------------------|-----------------------------------|
| <i>V.aconitifolia</i>          | <i>V.inconstans</i> (Ampelopsis)  |
| <i>amurensis</i>               | <i>Veitchii</i>                   |
| <i>capreolata</i> (Cissus)     | <i>japonica</i>                   |
| <i>Coignetiae</i>              | <i>orientalis</i>                 |
| <i>ficifolia</i>               | <i>Romaneti</i>                   |
| <i>flexuosa</i>                | <i>serianaefolia</i> (Ampelopsis) |
| <i>heterophylla</i>            | <i>Thunbergi</i>                  |
| h. var. <i>humulifolia</i>     | <i>vinifera</i>                   |
| h. var. <i>variegata</i>       | v. var. <i>laciniosa</i>          |
| <i>himalayana</i> (Ampelopsis) | <i>Spinovitis Davidi</i>          |

AMERICAN SPECIES.

*V. ESTIVALIS* (Summer Grape).—This species is probably the oldest of North American Grape Vines cultivated in England, having been introduced in 1656. It is described as abounding in wastes and woodlands. The leaves are broadly cordate, more or less deeply three to five-lobed



Wild Grape Vines in the Upper San Joaquin Valley, California.

naturalisation. Puny, sickly growth, with here and there a flower, is just as much a failure as from a purely natural standpoint is the indiscriminate grouping of varieties of any particular species that may vary greatly in many features. The natural requirements of plants must be the first consideration, and there is no doubt that many failures in naturalisation may be traced to the lack of careful observance of such primary rules, resulting not only in a loss of time and labour, but in a display that is mean and poor instead of bright and natural. True guides as to where to plant are obtainable not only in the writings of those who have been successful, but often in the careful study of the habitat and surroundings of the inmates of our fields, hedges and woodlands, and a deduction from this as to the requirements

other class possesses to the same degree. It is due to their surpassing grace, and to some extent also, no doubt, to the strong suggestion they give of the luxuriance that more especially belongs to the vegetation of warmer, sunnier lands than ours. Our indebtedness is shown in this, as in every other branch of ornamental gardening, to the floras of other countries, and in the beautiful genus with which in this paper I have to deal there is not a single species that is a native of Great Britain or even of Europe. The Grape Vines and the *Ampelopsis* (now included under *Vitis*) are, in regard to hardy species, represented most strongly in North America and Northern Asia,

being of a deep green colour when old, but in a young state covered on the lower surface with a reddish down. They measure from 4 inches to 6 inches across, the marginal teeth being broad and shallow. The berries are small—about the size of Black Currants—but have been improved by cultivation. The larger-leaved forms of this variable species are sometimes mistaken for *V. Labrusca*, but a ready distinction is afforded in the arrangement of the tendrils. In *V.estivalis* the tendril is missing from every third joint, but in *V. Labrusca* there is (with rare exceptions) a tendril or fruit-stalk at every joint.

*V. CALIFORNICA*.—This is, so far as my experience goes, the best of the American Grape Vines (*i.e.*, excluding the *Ampelopsis*) for colouring in autumn. It is one of the strongest growers, climbing in its native home over lofty trees. Its leaves, which turn a deep crimson in autumn, especially after a summer like that of 1893, are rounded and covered with down.

*V. CORDIFOLIA* (Frost or Winter Grape).—A strong, vigorous-growing plant with thin, three-lobed, cordate leaves, measuring 3 inches to 6 inches in diameter, the lobes ending in a long, fine point, the coarse teeth being also sharply pointed. The berries are black and only palatable after they have been subjected to frost, hence the common name of Frost Grape. A moisture-loving Vine, affecting in a wild state the banks of streams. It has the same arrangement of the tendrils alluded to in *V.estivalis*.

*V. RIFARIA* is a near ally to the preceding, and by some authorities is reduced to a variety of it. The leaves are larger than those of *V. cordifolia* (although the plant itself is smaller), smooth and shining, with long pointed teeth. The sweet, Mignonette-like perfume of the flowers of many American Vines is in this species especially apparent. The variety *palmata* (*V. palmata*, Vahl.) has the branchlets and frequently the petioles of a red colour. It was cultivated in the Jardin des Plantes at Paris well back into the last century, and is conjectured to have been sent to France by the French missionaries who were amongst the earliest plant-collectors in the Mississippi region.

*V. LABRUSCA* (Northern Fox Grape).—Before the introduction of *V. Coignetia* this was perhaps the most striking and effective of the true Grape Vines in cultivation in Britain. Its leaves are amongst the largest, both they and the young branchlets being covered on the under surface with a rusty-coloured or sometimes whitish down. They are of stout texture and vary considerably in shape, sometimes entire, sometimes deeply lobed. There is almost invariably a tendril or a fruit-stalk opposite each leaf, constituting the distinction between this and the four species previously mentioned, which has already been referred to. In a wild state the fruit has a musky flavour, but by cultivation it has been much improved, and numerous varieties of the species are grown in the United States. Englemann says that although not large as a rule, it occasionally reaches the tops of high trees. In England it proves to be a strong grower and deserves a high place amongst ornamental climbers.

*V. VULPINA* (the Southern Fox Grape).—A very distinct and handsome species, differing from the American species already enumerated in its close bark, which does not peel off. The leaves are small (2 inches to 3 inches across) and rounded, usually smooth and shining on both surfaces, and although coarsely toothed, rarely distinctly lobed. The species is worthy of note, as its small, bright green leaves may be used as an effective contrast with those of the *Labrusca* and *Coignetia* types, or may prove suitable in situations to which the larger-leaved species would not be adapted. Other American Grape Vines worth growing but possessing no particular value beyond those already described, are *V. rupestris*, *arizonica* and *cinerea* (the downy Grape), all of which are in the Kew collection.

*V. QUINQUEFOLIA*. This, the far-famed Virginian Creeper, is better known as *Ampelopsis quinquefolia*, or as *A. hederacea*. Introduced,

according to Loudon, in 1629, it has during the long period of its cultivation in this country become almost as well known as any of our native climbers. So far as autumn colour is concerned it is the finest of the American Vines, its foliage changing in the fall of the year to various shades of crimson, scarlet and purple. The leaves consist of five (occasionally one or two less) leaflets, which are broadly lanceolate, with a few coarse teeth on the terminal half. For covering arbours, walls, verandahs or old tree stumps there is no climber which produces so luxuriant an effect in so short a time as the Virginian Creeper does. The following varieties are in cultivation: *Major*, *incisa*, *hirsuta*. Their distinctive characters are indicated by the names. Deserving of more detailed mention is *Ampelopsis muralis*, a name current in this country and on the Continent, whilst the same plant is known in America as *Vitis Englemanni*. It is a distinct form of the Virginian Creeper, possessing the same shaped leaves and developing equally, or even more, brilliant autumnal colours. Unlike the ordinary form, however, which requires support if it is intended to cover a wall, this is self-supporting, and will attach itself as firmly to any suitable surface as *V. inconstans* does.

*V. ARBOREA* (*Ampelopsis bipinnata*).—A species of considerable beauty of foliage, differing from any other North American species here mentioned in having bipinnate leaves. The numerous leaflets constituting a single leaf are small and deeply toothed. It is not a quick grower in this country, and is naturally of a shorter and more bushy growth than is characteristic of the Vines generally. Introduced from the S. United States in 1700.

#### ASIATIC SPECIES.

*VITIS COIGNETIA*.—So far as this country is concerned, this is the newest and in some respects the most beautiful of all the Vines. It is a native of Northern Japan, its nearest ally under cultivation being the North American *V. Labrusca*. For many years a Vine clampering over a tall Pine in Mr. Anthony Waterer's nursery at Knapp Hill has been at once a puzzle and a delight to all who have seen it. The foliage before falling turns a glorious crimson, making one of the most beautiful of autumn garden pictures. Up to within the last year or so, however, its identity could never be ascertained, no specimens in herbaria or in living collections exactly matching it. There is now every reason to believe that it is *Vitis Coignetia*, of which numerous plants have been lately raised in this country from seeds collected in Japan. The under-surface of the leaf is covered with a woolly down, which in Mr. Waterer's specimen is reddish brown: the colour, however, varies; in some instances it is nearly white, but similar variations are met with in other species. The species is named in honour of Mme. Coignet, who gathered the seeds in the mountains of Northern Japan, and sent them to France in 1875. Seeds were again introduced to that country in 1884, but until recently very few plants appear to have reached England. We may now hope that in a few years' time it will constitute one of the most striking features of our gardens in autumn. The leaves are cordate, irregularly toothed, and measure each from 6 inches to 10 inches across. In size of leaf and vigour of growth it is at least the equal of any other Vine in cultivation. It has hitherto proved difficult to propagate by the usual methods of eyes and cuttings, and with only very limited success when layered. It can be grafted on several of the American species, but in view of its superior vigour that is not likely to be a satisfactory method, and now that it is well known there is no likelihood of a dearth of seeds sent direct from Japan.

*V. HETEROPHYLLA* (also grown as *V. brevipedunculata*).—The Hop-leaved Vine, which is the variety of *V. heterophylla* known as *humulifolia*, is the most generally grown and most beautiful of the various forms of this species. Unlike any of the species hitherto mentioned, it has, besides its handsome foliage, the additional recommendation of producing in autumn a pro-

fusion of pretty turquoise-blue berries. The leaves are smaller than in the common heterophylla and are usually more deeply lobed. This Vine requires in most places a position on a wall in order to induce it to fruit with proper freedom, and appears to succeed better where it is restricted for root room. It was originally discovered by Dr. Bunge in North China, but has since been found in Japan and Corea. A variegated form of *V. heterophylla* is very pretty, the foliage being mottled with white or faint pink. A sheltered, sunny position is necessary to develop the variegation to its full extent.

*V. INCONSTANS* (SYNS., *Ampelopsis Veitchii* and *A. tricuspidata*).—The unfamiliar name here given is the one that properly belongs to the plant so well known as *Ampelopsis Veitchii*. It is the most beautiful of all the species in the *Ampelopsis* section of the genus, and for covering walls has no rival. As is the case with so many of the Vines, this shows great variety in the shape of the leaves. In young plants the leaves are small and very often scarcely lobed at all, whilst in older ones they are cut into three lobes and occasionally into the same number of separate, short-stalked leaflets. This tendency to variation shows itself also in the colours the leaves put on in autumn. In the best forms the foliage assumes various rich tints of purplish red and crimson; whereas others have a large admixture of brown in the colouring. There is also a form whose foliage has a bronzy hue more or less throughout the season, but especially when young. This climber is planted abundantly in Oxford, and more than once have I been charmed in autumn by the glorious masses of rich colour on some of the walls and gateways of the college quadrangles. It is a plant of the very easiest propagation by means of cuttings. A native of Japan and introduced about 1868.

*V. ROMANETI* is a species of recent introduction, and one which promises to prove very distinct and vigorous in habit. It has large leaves, of much the same size and shape as those of *V. Coignetia*, but it differs from all the Vines in cultivation (except *Spinovitis Davidi*) in having the branches and petioles covered with bristles or stout hairs. It was discovered by the Abbé David in the Shen-si province of China.

*SPINOVITIS DAVIDI* is nearly allied to *V. Romaneti*, having the same bristly or even prickly character. Carrière says, however, that seedlings raised in France exhibit much variation in this matter, the bark of some being perfectly smooth. In any case the character is not one of sufficient importance to justify the creation of another generic name. In the Kew list of trees and shrubs it is referred (under a query) to *V. vinifera*. It was found by the Abbé David in the Shen-si province. Both this and *V. Romaneti* assume purplish red autumn tints.

*V. VINIFERA*.—Of the numerous varieties of the common Grape Vine the following may be alluded to: *Purpurea*.—This is one of the deepest purple-foliaged plants we possess. Although the colour becomes most intense in autumn the leaves have a bronzy purple tinge from the first. It is not so quick a grower as the ordinary form. *Var. laciniosa* or *apiifolia* is the Parsley-leaved Vine. Its leaves are very deeply cut, frequently into several leaflets, which are again deeply lobed. Besides these there are the Miller's Grape, with smallish leaves covered with white down, and the "Teinturier" Grape, the leaves of which assume a beautiful elaret colour before they fall.

Brief mention may be made of the following Asiatic species: *V. ficifolia*, a distinct plant with small round-lobed leaves like those of the Fig; *V. flexuosa*, *V. Thumbergi*, whose foliage turns red in autumn; and *V. serianefolia*, an interesting species of the *Ampelopsis* group, with tuberous roots like a Dahlia, and with palmate or bipinnate foliage. All these are natives of China and Japan. *V. himalayana* is a North Indian species with striking trifoliate leaves.

W. J. BEAN.



## THE POPLARS.

THE following species and varieties of Poplars are now in cultivation:—

*POPULUS CANADENSIS* OF *MONOLIFERA* (the Canadian or Swiss Poplar).—A well-known and easily distinguished species.

*P. C.* VAR. *RÉGÉNÉRÉ* (or *Peuplier régénéré*).—This is of a much more branching habit than the type, and grows straighter and more vigorously, attaining in fifteen years as large a size as the type does in twenty years. As a timber tree it is very highly thought of. Being very much in request, some growers have attempted to sell it under various new names, amongst which we may mention *Peuplier Eucalyptus*, under which title we have seen it shown at a great exhibition. It is one of the most valuable varieties of Poplar.

*P. C. AUREA* VAN GEERTI.—A variety with golden-coloured foliage.

*P. HYBRIDA BEROLINENSIS* (the Berlin Poplar).—A hybrid between *Populus laurifolia* and *P. canadensis*, distinguished from the last-named species by its more pyramidal habit of growth and its longer and slenderer branches. The leaves also are broader and the roots do not spread so much.

*P. LAURIFOLIA VIMINALIS*.—This is not a vigorous-growing species, and is not cultivated to any great extent. It is of slow growth, with a low, tufted habit and peculiar looking leaves.

*P. CERTINENSIS*.—An Asiatic species, as yet rare in cultivation. Leaves elongated and glistening, a novel feature in the genus *Populus*.

*P. FREMONTI*.—A species with elongated leaves, received quite recently from Colorado.

*P. GRANDIDENTATA*.—A North American species with broad, dentate leaves.

*P. G. PENDULA*.—A variety of the preceding with weeping branches.

*P. HETEROPHYLLA*.—Leaves heart-shaped. Introduced from N. America, and as yet not generally known by the trade.

*P. SIMONI*.—Foliage very distinct. Introduced from China.

*P. ANGUSTIFOLIA*.—A small-sized tree, with shoots of a light yellowish grey colour and lanceolate leaves. Introduced very recently from Colorado.

*P. MEDUSA*.—Introduced from N. America.

*P. EUGENI*.—A peculiar-looking tree, of very rapid growth and pyramidal habit.

*P. TREMULA* (the Aspen or Athenian Poplar).—An indigenous species, growing to a very large size, and owing its specific name to the tremulous motion of its leaves when stirred by the gentlest wind. It grows well in all kinds of soil, and especially so in soils of a light character, sending out its roots to great distances and producing numerous suckers.

*P. TREMULA PENDULA*.—A variety of the preceding species, with weeping branches.

*P. ALBA* (the Abele or White Poplar).—A well-known indigenous species.

*P. ALBA NIVEA* (the White Dutch Poplar).—An improved variety of the preceding species, remarkable for the snow-white colour of its leaves and bark.

*P. ALBA MACROPHYLLA*.—The leaves of this are broader than those of the preceding variety.

*P. ALBA PENDULA*.—A variety of *P. alba* with weeping branches.

*P. BOLLEANA PYRAMIDALIS*.—A remarkable and valuable variety, not much known as yet. A nurseryman of Calvados states that he was the first to receive this from a Russian botanist who was collecting in the Caucausus. Stolen from this nurseryman by one of his employes and sold to a firm at Orleans, it was first sent out by this firm.

*P. CANINENSIS* OR *CANESCENS*.—A species indigenous in Normandy. Leaves like those of *P. tremula*, but broader, whitish and smooth. Not knowing the scientific name of this species, I had it identified. About ten years ago a small shoot of it chanced to spring up in the heath soil of a plantation of *Rhododendrons*, where I allowed it to remain, and the tree now measures about 14 inches in girth and is a splendid specimen.

*P. NIVEA AUREO-INTERTEXTA*.—A variety the leaves of which are variegated with golden coloured interlacings.

*P. CANDICANS* OR *BALSAMIFERA* (Ontario Poplar).—A handsome, erect-growing species with large leaves, the glutinous buds of which give out a strong balsamic odour in spring.

*P. CANDICANS ELONGATA*.—An interesting variety of the preceding species, or, according to Professor Dippel, the offspring of a cross with *P. laurifolia*.

*P. TRICHOCARPA*.—A new kind from N. America, with still broader leaves than those of *P. candicans*.

*P. TRISTIS*.—Another variety of *P. candicans* with small leaves, dwarf habit of growth, rugose bark, and foliage of a very dark tint from its first appearance.

*P. ANGULATA* OR *MACROPHYLLA*.—Bark thick and angularly ridged. The leaves of this species are larger than those of any other known Poplar.

*P. SCAROLENS*.—A sub-variety of *P. candicans* with shorter branches and stouter buds, giving out a still more powerful odour than its parent does.

*P. NIGRA BETULIFOLIA*.—Resembles the Italian Poplar, but has smaller leaves like those of the Birch tree.

*P. FASTIGIATA* (the Lombardy Poplar).—Well known as the most pyramidal in growth of all the Poplars.

*P. FASTIGIATA ROBUSTA*.—A new and improved variety of the preceding species, which it excels in vigour of growth. It is anticipated that it has before it a future of note.

*P. PLANTIERIENSIS MASCLA* AND *P. P. FEMINA*.—Forms of the Lombardy Poplar, of which the sex has been fixed by arboriculturists.

In addition to the foregoing we may mention *P. cordata* and *P. rotundifolia*, varieties whose specific names sufficiently indicate the peculiarities of their foliage, and, concluding with the famous *P. euphratica*, we think we shall have enumerated all the kinds of Poplars which are now known. This last-named species was sent to us from the country of *Salix babylonica* a few years ago, and is as yet hardly known to European planters. It appears to be an exceedingly singular kind of tree, as when it is fully grown its foliage undergoes an extraordinary transformation, and travellers inform us that the same tree will exhibit on its lower branches leaves as round as those of the Judas tree (*Cercis siliquastum*), while the leaves on the upper branches have all the appearance of Willow leaves.—LETELLIER ET FILS, *Cult. (Cultures)*, France.

**Rhododendron Queen of Dwarfs.**—Where small plants are required this is one of the very best varieties in cultivation, for it is of a neat, bushy habit of growth and will flower profusely when little more than 1 foot high. The individual flowers are white, with the edges of the petals prettily crimped, and they are borne in such a compact rounded cluster as at a little distance to appear like one bloom. This particular variety was raised by Mr. Davis, of Ormskirk. One of its parents was *R. multiflorum*, and from it the dwarf habit and remarkable full flowering character of many of his hybrids have been derived. A second variety from the same source is *Bridal Bouquet*, which appears to be even dwarfer than the last-named and with rather smaller flowers of the purest white. These two forms are only slightly fragrant, but the Ormskirk seedlings with scented blossoms are now well known and largely grown. Of these, the weakest grower, Countess of Derby, has the finest blossoms, but all are very beautiful. The other scented varieties are Countess of Sefton, Duchess of Sutherland, Lady Skelmersdale and Mrs. James Shaw, all of which will flower well in pots 5 inches in diameter and upwards. These *Rhododendrons* should be struck from cuttings and stopped freely during their earlier stages in order to ensure a bushy habit of growth. A little more warmth than that

required for established specimens may be given to the young plants at first, as they will grow more rapidly so treated, but thrips are liable to be a trouble if too much fire-heat is used. Even in pots only 5 inches in diameter the plants will remain in good health for two or three years without re-potting, provided a reasonable amount of care is taken of them. A very good plan with *Rhododendrons* of this class is, after flowering to keep them in the greenhouse for a time, giving them frequent syringings; then in the summer they can be plunged out of doors in a sunny spot. Upon the treatment then given them depends the future display of bloom, for they need to be carefully watered, above all being particular that they are not allowed to suffer from want of water, and a good syringing when the heat of the day is past will also be of great service. The plants may occasionally be turned round in order to expose the whole of the plant to the same amount of sunshine, thus ensuring the thorough ripening of the wood and consequent display of bloom. For plunging material good cocoa-nut fibre refuse is the best.—H. P.

**Daphne Blagayana.**—Among a group of plants exhibited by Mr. T. S. Ware, of Tottenham, at the meeting of the Royal Horticultural Society on March 26 was a pan of this *Daphne*, and very pretty it was, the fragrance of its flowers being especially noticeable. It is a distinct and pretty species, not much known even now, though it was first discovered by Count Blagay on his estate at Lorenzburg, in Carniola, as long ago as 1837. When a coloured plate of it was given in *THE GARDEN*, August 31, 1878, it was almost unknown in this country. It is not invariably seen in a flourishing state, and I have found apparently healthy specimens die off in a few days without any visible cause. This *Daphne* is of a loose, straggling habit of growth, the creamy white flowers, which become purer in tint after a few days' expansion, being borne in small, compact clusters on the points of nearly every shoot. It does well as a rockwork shrub, that is, where the roots are so situated that they are at no time dried up, and partial shade seems to suit it well. When the roots are in the fissures of a rock they will travel downwards for a considerable distance, and are then rendered independent of superficial moisture. It is usually propagated by grafting, but from its spreading, partly procumbent habit of growth, layering can be readily carried out, and plants obtained in this way are more likely to form permanent specimens than those grafted. In the open ground the usual time for this *Daphne* to bloom is during the month of April or May.—T.

**Churchyard plants.**—The illustration on page 188 recalls to mind a query that appeared last year in *THE GARDEN* as to the most suitable trees and shrubs for churchyard planting and a suggestion that there are many things that might be used instead of relying on the few formal trees usually associated with such planting. I think *Spiraea arifolia* was included in the list; if not, it certainly deserves a place, being one of the best shrubs of English gardens. It may be used as a single specimen on the grass or grouped in the foreground with larger deciduous or evergreen trees. Its feathery plumes are, for instance, seen to great advantage when backed by the foliage of the English Yew. *Rhus Cotinus* is another feathery shrub that can be used in a similar position. Other shrubs that make very nice single specimens from 8 feet to 10 feet high and that are very beautiful when in full bloom are the double form of *Deutzia scabra* and the Virginian Fringe Tree. Two plants of somewhat larger habit one could safely recommend are the double-flowering Almond and the Snowy *Mespilus*. All the foregoing are of light, graceful habit, and I think this should be one of the first considerations in selecting trees and shrubs for churchyard or cemetery planting. There are not many native deciduous trees suitable, and, indeed, most of the exotics would attain to too great a size unless kept within bounds by occasional pruning. If this could be done with care and discrimination so as

not to destroy the symmetry of the tree, an occasional deciduous Magnolia, Salisburia and a few of the best Acers might be used. The objection to trees of a sombre, formal appearance would apply respectively to Pines, Thujas and most of the Abies. Cedrus atlantica and the deciduous Cypress would rank among the most graceful of the Coniferae, and Abies Menziesii is by no means a formal tree, but I find it is a little particular in the matter of soil, plants getting very ragged with us after growing a little over 30 feet.—E. BURRELL, *Claremont*.

#### THE NOBLEST OF EVERGREEN CLIMBERS.

MR. BURRIDGE wrote to us during the frost from the Botanic Gardens, Trinity College, Dublin, that he had just gathered over sixty varieties of the Ivy. This is a very instructive fact for all who care for beautiful hardy plants. Surely nothing that comes from the tropics or any other country can be more delightful than these Ivies may be made by those who grow and place them well. They are so simply grown, that few people ever think of the best ways of placing them so as to get a fair idea of their great beauty.

In many parts of North America and Northern and Central Europe the Ivy is not hardy, and people would give much for the privilege, which we may enjoy, of making really artistic things of these beautiful hardy northern climbers. We know that Ivy generally grows on a wall, and perhaps it cannot grow on anything better; but it is by no means the only use for it. Many people fear Ivy on trees. We should not hesitate to allow Ivy to grow on trees of secondary value, and, if not allowed to overrun the tree entirely, it will not do it much harm. That is only one way. Sunk fences, banks, walls, are all places in which we may plant our Ivies; and another pretty, though very much neglected, way is that of making screens of Ivy instead of the wretched hedges of Privet we often see cutting up gardens. Where a screen is needed, nothing is more beautiful for it than almost any kind of Ivy. The one most commonly used in that way, and by no means the best, is the Irish Ivy, which is so popular in Continental gardens; but it is better to make a change and use other kinds for this purpose. The screens we speak of are easily formed with trellis-work of any kind—iron, stout wire, Oak slabs, or any like material that may be handiest. Planted in fairly rich ground, the Ivies in a few years will cover the screen. Another plan we like very much is that of growing the choicer kinds of Ivy as pyramids, each on a stout prop, the shoots falling down gracefully. Ivy is very charming in all ways. Where there is a large area of dead walls it is a very wise thing to use so valuable a plant for covering them. Why, instead of the thatch and the rotten things we use for bowers and the like, should we not form wigwams and bowers of this delightful evergreen? Construct a stout and simple framework of the desired shape, and in a belt of good soil round the base plant one or more good forms of Ivy, and leave the rest to time. A roof of Ivy would be very much pleasanter than many things that are used for this purpose, and would not decay in the offensive way common to such thatching material as Heath, straw and Reed. The roof should be well tied together, and an occasional clipping of the Ivy will suffice to keep it out of the power of the wind. We are not sure that, with a little patience and care, it could not be made to do for sheltered sheds in pastures, instead of faggots and other rough material commonly used; and where a sheltered shed is placed near a wood, as is very often the case, the body of the shed might be built back into the wood, so as to leave only the front exposed to the field, and in that way we should protect our Ivy from browsing animals.

Another interesting phase of the question is the tree forms of the Ivy, which must not be supposed to be distinct kinds, as the Ivy itself when fully grown and exposed is very apt to take this

form. The form we generally see is the Ivy in its creeping state, but when it gets fully developed it breaks out into what we call the tree form, which gives another opportunity to enjoy the variety of aspects of this plant. All Ivies are good until we come to the wretched variegated kinds, which are not worth growing; collections of these are sure to disappoint; the so-called variegation is only disease, and it is almost as well that it is so, because if such things grew freely the effect would be far from beautiful—hard, spotty, and unnatural.

Among the more beautiful forms met on the occasion referred to, without noticing the curious splashed kinds, there are the himalaica or Northern Indian Ivy, a very pretty form; atro-purpurea, a leathery looking leaf, and very dark; azorica, a very leathery, Vine-like leaf; triloba or tridentata, a handsome arrow-shaped leaf; obovata, a very pretty slightly bronzed leaf; palmata, a most graceful Ivy for a tree or wall; H. amurensis, a tall, very vigorous kind; scutata, or Shield Ivy; H. Ragneriana, what they call the old Irish Abbey Ivy, an immense Aralia-like leaf, much larger than what is called the Irish Ivy; dentata, a very graceful leaf, massive and leathery too; algeriensis rhomboidea, a spoon-shaped and very distinct leaf, and so on through a long list, scarcely one of which is not a distinct and valuable climbing shrub. It would, of course, be possible to make a very delightful garden of these Ivies alone on walls, rocks, or even the ordinary surface of the ground, with groups of Forsythias or Japan Pear, or any other hardy flowering shrubs one might care for among them.—*Fichtl*.

### GARDEN FLORA.

#### PLATE 1009.

#### CYPRIPEDIUM CHARLESWORTHII.

(WITH A COLOURED PLATE.\*)

AMONG the host of novel and beautiful Cypripediums introduced within the last few years the subject of the accompanying plate takes a very high position. It was originally imported by Messrs. Charlesworth, Shuttleworth and Co., of Heaton, Bradford, from the East Indies, and when exhibited by them at the Royal Horticultural Society's meeting at the Drill Hall in September, 1893, was awarded a first-class certificate by the Orchid committee. That it was deserving of this distinction there can be no doubt, as it is a decidedly beautiful species, and one that is rapidly becoming popular. As will be seen by the illustration, the dorsal sepal is very distinct and differs from that of most other known kinds. The pure white staminode is also a noteworthy characteristic of the species. In growth it somewhat resembles *C. Spicerianum*, but the leaves are marked on the back with rows of dots of a brownish purple tint. Although not a very robust grower, the culture of *C. Charlesworthii* presents no special difficulty. A shady position in a warm, moist house is essential, and the compost may consist of loam fibre, good peat, and chopped Sphagnum Moss in about equal proportions, keeping this in an open condition by a liberal admixture of finely broken crocks, charcoal, and a few pieces of limestone. Until the plants are thoroughly established it is safer in potting to elevate them a little, as this prevents the possibility of water collecting about the axils of the leaves, which is so often productive of injury to newly-imported Cypripediums. A thin compost will also suffice at first, the additional drainage being an advantage, as an abundant supply of water is necessary when

\* Drawn for THE GARDEN at the Royal Gardens, Kew, by H. G. Moon, November 23, 1894. Lithographed and printed by Guillaume Severeys.

the roots are well on the move. The best thanks of orchidists are due to the above-mentioned firm for the introduction of this exquisite species, and as they have apparently imported it in quantity, we may confidently expect many variations from the type as the plants flower. Probably it has been taken in hand by the hybridists ere this, and it will no doubt be frequently heard of as one of the parents of future hybrids. R.

### THE WEEK'S WORK.

#### HARDY FRUITS.

PEACHES AND NECTARINES.—Trees on warm southern aspects will now be bursting into full bloom, and where they are left unnailed as long as possible there should be no further delay in nailing and getting the protecting materials in position. In nailing, use new shreds, as old ones are not free from insect pests. Young trees are often much injured by being given too little space to develop. In training allow ample space for the laying in of next season's wood. Peaches and Nectarines given free play in the way of extension are much less subject to disease. Nailing this season is considerably later, and many may think my advice full late. I am never in a great hurry to do it, as though the trees may be studded with fruit-buds, by careful handling they are readily placed in position, and with dull, sunless weather are best left unnailed to the last possible date. Last season the trees were in full bloom by this date and some fruits set, showing that it is necessary to do the work advised according to season. Some trees flower earlier, but I always leave nailing to the latest moment, then do it quickly, and protect when finished. Trees requiring much pruning should not be left till this late date; pruning may be done earlier, as advised in former notes, but there is little pruning needed if the trees get the necessary thinning and removal of old fruiting wood as soon as the crop is cleared. If shortening back last season's wood has been neglected, it is well to observe that fruiting wood should be cut back to a wood-bud. It is not always easy to determine what are fruit-buds, and in that case the fruit should be removed at the end of the shoot when visible, and the nearest shoot allowed to grow. In training it is well to bear in mind that gross shoots do not produce fruit, and in some cases total removal would be better.

VINES ON WALLS.—These are often used as a cover for naked walls, but in few instances are they grown for the fruit, as in our variable climate the fruit cannot be depended upon to ripen. Many plants are so much neglected that ripening is out of the question, as the roots are never given any food and the shoots get too thick. Good crops may be secured by growing the canes on the single or double cordon system and pruning back to spurs, giving the roots food in the way of liquid manure and surface dressings of soil and manure. Now is a good time to remove useless wood, giving the strong or new shoots ample space. Starved canes cannot be expected to make good wood, and a much better result would be obtained by liberal top-dressing at this season, taking away old surface soil till the roots are reached, and giving new in the way of good turfy loam, bone meal, wood ashes and manures.

APRICOTS.—Many trees will now be in full bloom, so that any notes as regards covering and protecting the trees will be late, but where these fruits are grown under glass covers or protectors I would give timely advice as to moisture. For the past two months the rainfall has been very slight. Few trees fail sooner than Apricots; the roots of healthy vigorous trees should be on the surface, and though watering may not reasonably be expected to begin for some weeks, it is well to see that the protection does not rob the trees of moisture, and to supply the deficiency. Any work left undone in the way of surface dressings to wall





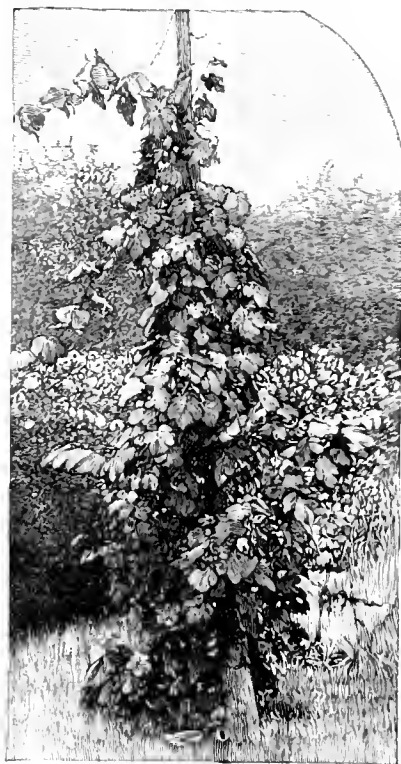
trees may be done; indeed, now is a good time to give food in the way of surface soil mixed with rich fertilisers, as the trees being on the move will call upon the roots for more food. Apricot trees are gross feeders, if the term can be used. They require much food in the way of frequent surface dressings, much moisture during growth and keeping the roots active at the surface. It is much better to obtain a luxuriant growth than to just keep the trees alive. In protecting late trees give only a light airy covering, as too much causes a weak bloom, which though it may set soon turns yellow and drops. Trees in favourable positions and full of vigour will well repay lightening of the crop at the earliest moment possible after setting.

**CHERRIES, PEARS AND PLUMS.**—The first-named will require a light cover, as birds are troublesome near towns. Small birds do much injury just before the blossoms open and in a few days will spoil all chance of a crop. It is well also to protect choice early kinds from cutting winds and frost. The Cherry being the earliest fruit to ripen is always valued on that account. For covering I use a small square mesh fish net, doubled or trebled according to the position of the trees, and there is no necessity for the nets, or whatever covering is used, to reach the bottom of the wall by at least 3 feet. This allows anyone to get at the trees, but to protect from birds it is not of service, as the nets must be fastened to the wall. Pears on gable ends of buildings or walls are often shorn of their crop, as many kinds bloom early. With these, different means to protect must be adopted. I have used Fir branches, and serim canvas cut in widths and run along the main shoots will save early bloom. Choice cordon Pears well repay a little care at this season. The walls of these may be covered in the same way as advised for Peaches or Apricots, but whatever covering is employed it should freely admit light and air. Plums, though often left to take their chance, may often be covered readily by the same material which has been used for Peaches or Apricots. It frequently happens that the earlier bloom is safe and there is little frost, but later a severe frost does injury to Plums, Pears and late fruits that might be saved by protection.

**FIGS.**—The covering used for these trees should now be removed and pruning done, the shoots regulated and placed in position for fruiting. In an earlier note I advised partial uncovering, so as to inure the trees gradually; but the trees should not be left longer, pruning being necessary, and the warm sun will soon cause the new wood to grow freely. Trees that have been tied together so as to save space in covering will require some care in selection of best wood to furnish the wall. It cannot be seen at this date which are the best fruiting shoots of last year's growth, but there need be little pruning if these were kept thin last autumn and the wood thoroughly matured. Should the trees be at all thick, it is an easy matter to go over them as soon as the fruits show, removing any shoots that are barren. In no case should sucker growth be allowed on trees having a good quantity of leading branches. At times one must resort to suckers if frost cripples the older wood. In nailing keep the trees quite close to the walls, as they get more warmth and can be more readily protected. Old trees that have been much neglected should have the gross wood or that which protrudes a long distance from the wall cut away, and though a crop will be out of the question this season, by laying in new wood and giving it ample space, the trees will give a good return next season. Trees allowed to run wild will also need root-pruning. When cutting the roots it is well to give new soil, turfy loam, with a liberal addition of wood ashes, burnt garden refuse, mortar rubble, or other materials that will produce fruiting wood, avoiding manures in the soil, which are best supplied as surface dressings.

**PLANTING FIG TREES.**—There will be great losses in cold, exposed gardens, the Fig being very

tender, and even some with ample protection will have suffered. Vigorous trees will doubtless send up sucker growth, and these must be regulated and encouraged to fill a good space of wall this season, but where planting is necessary, now is a good time to do the work. To avoid future losses give the best position, such as the angle or junction of a wall or corner facing due south or south-west. On the latter aspect I have obtained the best results. It is advisable to restrict the root-run by bricks, tiles, or other means. The soil should be as advised above, and the trees thrive well in a chalky soil, so that when procurable it should be used freely. Plant firmly and give the surface roots every encouragement to run freely, as they delight in an open compost, with liberal supplies of moisture. Doubtless the Brown Turkey is the best all-round Fig we have for either indoors or the open. Young trees are supplied in pots, and it is well to handle the roots carefully, not to shake out like Vines, but to unwind the long roots and merely lay in the soil, filling up and firming as the work proceeds. In



Claret coloured Vine. (See page 250.)

training do not attempt to lay in small wood, but to get leading branches to form the body of the tree. These will soon push out fruiting wood another season.

G. WYTHES.

**THE KITCHEN GARDEN.**

**EARLY LEEKS AND ONIONS.**—Where seed of these two vegetables was sown the first week in February for producing extra large early bulbs, the seedlings will by this time be sufficiently advanced for pricking off either into frames furnished with a gentle warm bed of leaves, or into ordinary rough-made deal boxes. A few growers pot them off into pots 3 inches or 4 inches in diameter, which is in reality the safest plan, as then the young plants can be transplanted with little or no root interruption. In any case good retentive loamy compost should be used, and instead of mixing manure with the soil, place a good layer in the bottom of the boxes or pots over the drainage. Pot or prick off very carefully, spreading out the tender roots like the extended fingers

of a man's hand, and covering them carefully at first with a little of the finest of the compost, and finally making the remainder very firm. Water home, and in the case of pots or boxes give a position near the glass in a temperature of from 50° to 55° at night. Here they may remain for three weeks, when they must be gradually hardened off by removal to an ordinary cool frame, open-air planting being carried out about the third week in May. It is always a good plan to mix a little soot with the compost when pricking out of the seed boxes into pots, this being obnoxious to the terrible Onion maggot.

**MAIN CROP CARROTS.**—In favourable soils that can now be worked and trodden upon without becoming sticky the main crop of Carrots may now be sown. Presuming that the necessary preparation in the form of ridging up to the frost and wind, the incorporation of soot and wood ashes, and frequent surface stirrings since the frost disappeared has been given, all that is now needed is a fine sunny day. Tread first lengthways and then crossways, draw the drills shallow, sow rather thicker than usual, Carrot seed being none too reliable in the open this year, and before filling in give a good dusting of burnt refuse, firm the surface well, and use a fine-toothed rake in order to remove all stones. In regard to varieties, this sowing is best represented by the Intermediate type, although where the soil is deep the Long Red Surrey is a capital sort to grow for late winter use. Veitch's Matchless Scarlet and any of the improved forms of James's Intermediate cannot be excelled either for freedom of growth or quality. Where the soil is but shallow and poor, shorter varieties, such as Scarlet Model, will be found the best. In such soils assistance may be given by a broadcast sowing of some quick-acting fertiliser twice during the growing season in showery weather. The French or Parisian Forcing, which was sown at the commencement of February, will need all the encouragement possible by early thinning, using the Dutch hoe between the rows, and a gentle moistening with tepid water into which a little guano has been stirred. Wireworm and grubs generally do not like guano. If windy weather ensues, the fly will probably appear on the tops. This must be stopped by overhead sprinklings of wood ashes.

**SUCCESSIONAL POTATOES.**—In many gardens Potato planting, even of the earlier section, is by no means completed. Such, however, should now be brought to a speedy close. All second earlys should also be got into the ground, as if left any longer in the store rooms the sprouts will increase in length at a greater ratio than they will do under ground, and therefore be more liable to fall victims to May frosts, as protection to any great degree cannot always be given to large breadths of second early varieties. To those who have yet to purchase the sets I would recommend Snowdrop for this planting. I have proved its excellence for some years, and know it to succeed in many other localities and in a great variety of soils. Another good trait in its character is its long-keeping powers, being frequently eatable late in spring. Sutton's Seedling must also be named, as, all points considered, it cannot be beaten for a second early. I have still a high opinion of Beauty of Hebron, as, although a pink-skinned variety, it has a mealy flesh and a delicious flavour, while nothing can be said against its cropping powers. If grown on wet soils it is somewhat prone to disease, but when favoured with a good warm rooting medium and perfect drainage it seldom becomes affected. A splendid pebble-shaped variety is found in Windsor Castle. This is sure to become a leading Potato where quality and quantity combined are a desideratum.

**MAIN CROPS.**—From the first to the second week in April is a capital time in the majority of cases to plant for the late autumn and winter supply. In a former calendar I advised looking over the stock at the beginning of March, removing all the sprouts that had formed during winter and laying them out not too thickly in outhouses, merely covering with litter should the nights be frosty

Where this course was followed all the sprouts that have since formed may be allowed to remain on the tubers, as they will be short and stout; and as late Potatoes are usually planted at a good depth, no fear need be apprehended of injury from frost, at least in ordinary seasons. Where these later crops are grown in fields the common practice is to fork farmyard manure into the trenches and to place the sets on it, afterwards filling in. This is all very well on moderately light soils, but to adopt it on strong ground, particularly that not over well drained, is to court disaster. Far better is it in such cases to forego the manure in the first place and to apply it later on in the shape of broadcast sowings. Strong farmyard manure in wet seasons often does incalculable harm by inducing a rampant and late growth at the expense of the crop, and is more-over the forerunner of disease on heavy soils. An error often committed in preparing land for field crops is using dry, husky manure instead of solid spit manure. The former is often so dry and hard that, should the summer prove a dry one, it is found in just the same condition at lifting time, having acted simply as a sieve for what little rain there was. If the land has not been well worked, postpone planting until this is the case, as this is most essential; indeed, is often of more importance than all manures. A good selection being very important, the under-mentioned may be depended on to succeed in the majority of soils: Schoolmaster, one of the best market Potatoes in cultivation, the number of years it has been grown, and that largely, being the best proof of its merits; Lady Truscott, oblong in shape, a heavy cropper, of fine quality, and one which, although it may be lifted and eaten in September, will keep sound and good till spring; White Elephant, objected to by many on account of its liability to become coarse, is nevertheless a good and profitable Potato grown on poor land or where an impoverishing crop has preceded it, flesh then mealy and good; Renown, a splendid new Potato, almost as round as a cricket ball, cropping most freely, keeping well, and unsurpassed for eating purposes; The Bruce, highly spoken of by some, is so similar to Magnum Bonum as to be indistinguishable from that variety. For growing in all soils and climates I think the Magnum is still unbeaten.

**SMALL SEEDS, SECOND SOWING.**—The second week in March I recommended a sowing of Cabbage, Brussels Sprouts, Cauliflowers, and other early autumn maturing vegetables in gardens favoured by shelter and where the demand was great and constant. In such places a second sowing on a somewhat larger scale may now be made of the late autumn section of green crops. In small gardens where no houses or frames exist, the earliest sorts of Cabbages, Cauliflowers, and Lettuce should also be sown. I always sow Cooling's Matchless Broccoli at this date, one of the hardiest and very best of spring varieties, but one requiring a long season of growth. In the south the middle of April would probably be soon enough. Snow's may also be sown now for December use, although for my own part I prefer Backhouse's Winter White, it being more certain as to date of heading in and, I think, also somewhat more hardy. The majority of the Broccoli may stand over till the mid-April sowings. A little seed of the taller varieties of Brussels Sprouts may also be sown, as if the season is fine and forward earlier batches of the dwarfier sorts are apt to develop miniature Cabbages instead of hard knobs; whereas the later sown seed of Scrymgeour's Giant and similar strains which really need a longer season of growth produce perfect sprouts and plenty of them. Where only one sowing is made the present is about the best time to make it, choosing an intermediate variety. For such gardens also Cocoa-nut and Enfield Market Cabbages will be as good as any, both being very reliable and following each other in the order named. Pearl and Autumn Giant Cauliflowers would answer best, and Alexander Cos with Continuity Cabbage Lettuce will be found very suitable. If seed of Self-protecting Autumn Broccoli is sown now, good heads will be forth-

coming from the end of October throughout November, a sowing later in the month being best for plants to continue the supply from that date till the new year with protection.

**RADISHES.**—These may now be sown at intervals of a fortnight, Wood's Frame and French Breakfast being the best till April is out, when the longer red and Turnip varieties answer best. If the latter are sown too soon in the year they grow slowly, and are consequently hot and stringy. A nice sunny position will be advisable until May, when a cooler aspect should be chosen. Attend to thinning out those growing in cold pits and home-made frames, giving occasional soakings of tepid water, as Radishes are moisture-loving subjects.

**GLOBE ARTICHOKE.**—These will be extremely scarce this season, as the majority of stools, even on warm soils and where protected, have been either killed outright or so weakened, that a late and puny growth is inevitable. Where growths start from the base of the clumps it will be well to sever a number of these from the parent and pot them up, afterwards placing them in a cold frame and protecting from rains. These will grow into fairly large plants by June, when they may be transplanted into freshly prepared ground well enriched with manure. Sowing seed is very risky, as so often the produce is utterly worthless. At times, however, this is compulsory, when the only plan is to mark the most worthy plants when yielding and to take offsets from these in spring, casting the rubbishy plants away.

**CARDOONS.**—Where these are much in request, a small sowing may be made on a warm border, or, better still, in a box in a greenhouse. These will come in for autumn use, the main sowing being deferred yet for a little.

**SEED BEET.**—Any roots of special strains intended for stock may now be planted on rich soil in an open and sunny position, the crowns being covered on cold nights with flower-pots for the first three weeks. As soon as growth commences a watch must be kept for sparrows, as these pests often divest the roots of every morsel of leafage. When this is the case a secondary growth has to be made, which is often too late to produce seed-stems in time for ripening satisfactorily. Wood ashes sprinkled over the crowns in showery weather will often prevent birds at taking them.

**SOWING ASPARAGUS.**—Seed either for producing roots for forcing or for the formation of ordinary beds may be sown now. If for the former purpose an open quarter should be selected, shallow drills drawn, an alley being left between every four rows. This space will allow of hand-weeding being carried out without trampling amongst the young plants. Burnt refuse may be used in the drills after sowing, as sometimes the seed is badly attacked by grubs. When the seed is saved at home it should always be taken from plants that bear a few large berries in preference to those which yield large numbers of small berries, the former always producing the best Asparagus. Any convenient sunny spot will do for sowing the seed for nursery work, 1 foot apart being a good distance between the rows.

**SOWING SEAKALE.**—This also should be sown during the early part of April, and where for permanent beds, to be forced by pots and leaves, the soil must be rich and sustaining. Four rows to each bed is a handy number, the seedlings being duly thinned out to the required distance some 3 feet from each other. Where sown for producing crowns for forcing at the end of the second year, 18 inches from row to row and 15 inches between the plants when finally thinned will answer. Where ground is plentiful 6 inches more may be allowed. Both the Lily White and ordinary varieties should be sown, the latter forcing the most readily during November. Rather shallow sowing is important. J. CRAWFORD.

**Onion Rousham Park.**—This, is I consider, one of the best keeping varieties grown. For years I have sown it with James's Keeping and Bedfordshire Champion—two of the best keepers

we have; but till this season I have never had the bulbs frozen for so long a time, and the variety named is equal to the late keeper, being sound and good. In advising the growth of the above I do not mean that huge bulbs were grown, as these do not keep—at least, I have heard such is the case. I do not grow for exhibition, and therefore have no need of the gigantic bulbs, but my opinion is that they are bad keepers, and this brings me to the point—the value of Rousham Park for what may be termed general use for winter and spring supplies when the seed is sown in the usual way, thinned, the bulbs well ripened, wintered in an exposed loft or room and merely protected from damp. This variety is somewhat after the White Spanish type and valuable for its mild eating, so that it may be termed a good all-round variety. Those who desire may grow it to a large size by sowing in heat, but I do not advise it for supplies at this date, as medium-sized, well-ripened bulbs are best.—W. S. M.

## ROSE GARDEN.

### NOTES ON ROSES.

SOME special treatment will soon be necessary among our climbers under glass if we are to secure the best of wood for another season's forcing. It is absolutely necessary that healthy and well-ripened growth be obtained if we are to have a good show of bloom early next year. We need get this as early as possible, so that a brief period of rest may be afforded before the plants are re-started for winter bloom. Our early climbers have finished flowering and will now be cut down; not at one operation only, but in two at a month's interval. Culture with a view to securing good wood should be commenced at once. If we look at this class of Rose in the open air we find it does not cease growth in the least during spring and summer. Even while the last blooms are opening young shoots are actively breaking from around the base. To give any kind of check to these is a great mistake, as not only does it lengthen the time necessary to make wood of the desired length and strength, but we seldom get wood of the same high quality. At no time can we grow our climbing and other Roses under glass to greater perfection than the present. Sufficient light and warmth are available without the need of dense shading from a powerful June and July sun. While many are still growing their climbers I trust mine will be maturing themselves in the dry autumn air. Even grafted plants of this year's working are carrying rods of 3 feet and upwards.

A word upon this spring pruning under glass. It is practically the same as summer pruning in the open, our Roses being in a similar condition in each case. As the wood which has just flowered is of scarcely any value, there can be no good gained by retaining it; rather the contrary, for then we are not only providing more room for the new growth, but diverting the whole of our plants' strength to the production of really useful rods. We follow this plan with pegged-down Roses in the open. Pruning is, or should be finished in all but a few cold localities. The majority of us are content to wait much later than usual this season. Very little long growth will be left this spring after the dead wood is removed, and as much of what remains will be crippled, I would recommend that we cut harder than usual. Indeed, our main hope lies in shoots from the base, and there is very little good in retaining wood that will at best produce only growth of moderate quality. In another note I have spoken of how sadly our Roses look in the south, and from a recent visit to the eastern and midland counties I believe we are much the harder hit of the two. Absence of snow was a great misfortune.

Once more turning to our Roses under glass, I would point out the need for a shift in the case of very young plants. My own, that were rooted from cuttings a little later than this last year, were

potted into 3-inch pots early in January and are now being placed into 6-inch pots. Own-root Roses enjoy a more porous soil than those worked upon the Brier stock. A slight shade will soon be afforded to our Rose houses, not so as to darken in any way, but barely sufficient to break the fiercest of the sun's rays. Under these conditions and not otherwise we can afford a moist atmosphere and an occasional gentle syringing during the prevalence of very bright weather. Air that is alternating between extremes of dryness and moisture, with wide changes of atmosphere, will not suit Roses. Liquid manures will be sprinkled about when damping down as well as freely afforded to all plants not recently repotted. We cannot get colour and quality in the flower without having the same in the foliage. Rather more flowers of sulphur will be added to the syringing solution during this trying time as regards mildew, but we shall still keep both this and liquid manures far weaker than many use, preferring to use them more freely rather than run the risk of overdoing in strength. R.

#### AMONG THE ROSES, MARCH—APRIL.

It has been a matter of surprise to me that more complaints and regrets at the severe loss occasioned during the frost have not appeared in the gardening press. After far less disastrous winters we have had notes from many quarters. Certainly they never had a worse appearance here, and the state of our beds is indeed deplorable. Good plants of many varieties are killed outright. The Hybrid Teas seem very hardy as a class. Caroline Testout, Viscountess Folkestone, and Grace Darling are almost untouched. Now that our beds of dwarfs are pruned, they present a most bare appearance. Many varieties are cut down to the ground line, and with those least affected it is only here and there that any of last summer's growth was in a fit state to leave. On the walls and fences it is little better, nor is a very sheltered garden of my neighbour's any great improvement upon our own exposed plants. I fear we have not a plant of Climbing Perle des Jardins, Lamarque, and the white Banksian alive. Somewhat strange to record, the Fortune's variety of the latter has withstood the cold well, although side by side with the white Banksian. Unfortunately, this is the solitary-flowered kind, and of very inferior merit to the true white Banksian, although frequently passed off as such. Kaiserin Friedrich, one of the Dijon Teas, is even more hardy with us than the old Gloire de Dijon, and l'Idéal also stands well.

Pruning was an exceedingly simple matter, as after the dead wood had been removed we had very little left. That climbing Roses must be a failure this season I think all will admit; 40° of frost were registered by a neighbour with a tested thermometer, while from 25° up to 35° were frequently reached. When so many shrubs are killed we need wonder little at the fate of our Roses. Last year at this time we were looking forward to a delightful season; with the wood sound and growth breaking freely, it seemed that nothing short of a late spring frost could prevent a good summer display. This, however, we experienced both at the end of May and June. At present very little of our Rose wood is breaking, and there is not the slightest prospect of a good Rose season from any but dwarf maiden plants. Once more are our standards terribly injured or killed outright in a large number of cases. Even those upon the very short stems are almost as bad. A day or two back I was looking over some plants of a friend's who had protected with Bracken, and added some straw when the weather became so severe. There is a little more live wood upon his than mine, but this is hard hit, and much of it will be cut away. The dwarfs that were covered with soil at the base look better, although even here there is considerable injury.

When we turn to the budded dwarf stocks of last summer there is a better outlook. Both upon the Manetti and Brier in seecling and cutting form the majority of the buds look well, although

very backward. No time should be lost in cutting away the stock of these. A sharp knife and the left hand pressed firmly around the collar of the plant just below the Rose bud will allow of a cleaner and more healthy cut than that from any secateurs. If a knife is used thus, I prefer to cut down close to the bud, but should the secateurs find favour, it is well to leave 1 inch or 2 inches of the stock. I would adopt the same plan with budded standard Briers.

As Rose growth progresses we shall need to draw a little of the surrounding soil towards the bud. It softens the stock and encourages mere uniform swelling of that and the Rose. This is not all, as it also affords good support against wind. We cannot tie them until growth has progressed several inches, but soil around the base keeps them safe and helps the union at the same time. When cutting back the stocks and previous to earthing up we must keep a close look-out for suckers. These push early and are generally prominent enough to be easily seen by the time we need draw soil around. Cut them out deeply so as to eradicate the eyes usually found around them. With standards also a close and early look round for suckers and breaks from the stem is advisable. When this is done now we not only save much time, but the work is more complete. We can scarcely give too much care in sticking and tying our maiden Roses when growth is sufficiently advanced. RIDGEWOOD.

**Among the Roses in March.**—What remarkable weather contrasts we have season after season. Last year at the present time we were looking forward to a glorious season; the wood had come through the winter safely, everything looked promising, and plants were bursting into growth. In fact, our chief concern was the earliness of the season and fear of later frosts in April or May. Nor were these without reason, seeing that for so many years we have experienced keen frost at that date. Both in May and in June we had frost of sufficient severity to blacken many subjects besides Roses. For weeks afterwards we saw the sad effects of this cold wave. But there are no signs of early growth this season. To-day (March 7) I have taken a careful look round, and I do not think that among the standards and half standards the survivors will average more than one in six, while the majority of the dwarfs are killed to the ground line. We certainly have had a more severe time for Roses in mid-Sussex than ever before. Laurels and Mahonia are quite killed in many places, and the protection of snow was not accorded this district, although a few miles away a considerable amount was lying during part of the severe frost. Here, unfortunately, we had the full force of keen wind with no snow, and the result is greater havoc among Roses than I have noticed in many other instances. I had hoped to be able to give a better report than this, more especially with such a steady and favourable general thaw; but Roses are much too hard hit in this neighbourhood for the most sanguine to look for even a medium Rose season with any confidence.—P.

**Climbing Niphetos.**—There is no comparison between this variety and the ordinary Niphetos for producing bloom. In fact, while the latter can almost be termed a perpetual bloomer when in comfortable greenhouse quarters, the climbing variety, so far as my experience goes, is really not worth growing where profit is considered. True, it will cover a large space of wall or trellising in a very short time, and for that reason is useful for hiding unsightly places, but that is all that can be said in its favour. It is strange that two Roses bearing the same name, though differing in form of growth, should be so opposite in blooming powers.—J. C.

**Are smooth or prickly-wooded Roses the hardier?**—The results of the present frost should go far towards dispelling the idea that one or other of these is hardier than its opposite. If we take smooth-wooded kinds, we find Paul Neron, Captain Christy, and others very hardy indeed, while Victor Verdier and Horace Vernet are

standing examples to the contrary. Some dozen or more varieties could be named upon each side in support of this. Turning to those with many thorns, where have we a more tender Rose than Rev. J. B. M. Camm, or a more hardy one than *Rugosa rubra*? The Mosses, too, and Scotch Briers are among our hardiest Roses, but equally prickly ones from other sections are not. So crossed and intercrossed have our Roses become, that any visible characteristics are of little guide in this respect. In conversation with an amateur friend a few days back while comparing notes on the state of our Roses and the probable prospects after this frost, he stoutly maintained that the thorns were a needed protection to tender varieties.—R.

**Roses under glass.**—The question discussed by "Ridgewood" at page 159, whether Roses are better grown in pots or planted out will most likely be decided in different ways by different classes of cultivators. Doubtless Roses can be cultivated successfully planted out in a border of good soil under glass, but if the house is filled with them it cannot be very well used for anything else; whereas if the plants are grown in pots they can be removed anywhere during the summer months. Some good growers of Tea-scented Roses in pots will not place their plants out of doors at all, preferring to keep them in the greenhouse or Rose house. I believe this is most desirable if the very best results are to be obtained from large specimen plants for exhibition, for instance. My plan with them is to stand the pots containing the Rose trees on two bricks, or if the flower-pots are large, three bricks. The large hole in the centre for the egress of water is clear of the ground; the water passes freely out and the air passes freely in, keeping the potting material in the best possible condition. Except *Maréchal Niel* and any other vigorous-growing sort of this type, which certainly ought to be planted out, there are no others I would care to grow in that way. All other Teas I would grow in pots. *Gloire de Dijon* and *Mme. Berard* should be planted out, and they will grow quite as strongly as *Maréchal Niel* in suitable soil.—J. DOUGLAS.

#### ROSES DEAD AND DYING.

SUFFICIENT time has now elapsed to determine which among Roses have survived the late severe frost. Evidently enough it is not a question of which varieties or which types have proved the hardiest, as there are numerous losses in all the sections. Once more, however, there is no mistaking the fact of the standards on the common Brier stock being the least hardy of all, and I believe we may safely assume that it is these same naked stems that are the most vital parts of the trees. All the while the stems continue to increase in size and the heads remain in a vigorous, healthy state frosts rarely injure them, but when once they give signs of failing health it only requires a moderately severe frost to finish them up. If what has taken place in various parts of the south-western counties of England is any criterion, there has been an extra large number of standard Roses to root out this spring. Losses there are to account for nearly every winter, but very rarely so many as are to be noted this spring. If this leads to the cultivation of more dwarf Roses and fewer standards, then the lesson will have been profited by and good rather than regrettable harm be the result. There is always an artificiality about standard Roses, and as they also prove by far the least hardy, then the time ought not to be far distant when there will be little or no demand for them. Unfortunately, it is not standards only that have been largely destroyed by frosts, but those who have lost their dwarfs, or what should have been dwarfs or bushes, have only themselves to thank in most instances. Where moderately severe or rational methods of pruning have been adopted every spring there are few or no losses. It is those that have been allowed to grow wild or which have been lightly topped and not pruned as we would prefer to carry out this important work

that have suffered the most. Once allowed to go unpruned for one season they become leggy, produce fewer fine flowers, and do not prove very much hardier than standards. Dwarf Roses that are rather freely thinned out and cut back every year possess far greater vitality, and are much less liable to destruction than are many not so pruned—at least such is my experience—and they rarely fail to bloom grandly. In Mr. Brutton's garden near Yeovil, Somerset, there is a long border devoted to Roses on their own roots, some being struck on the place and some originally on the Manetti stock, but long since rooted off. These great spreading clumps, for that is how they can best be described, are annually pruned to within 3 inches of the ground, not an old stump or growth showing above that height, and also receive a rather heavy mulching of manure, yet in spite of these incentives to strong growth they never fail to flower grandly every summer, and there is not a single loss among them from the frosts. These great clumps might be taken up, pulled to pieces and replanted with impunity, that is to say, might safely be treated similarly to herbaceous plants. Contrast this border of Roses with the hundreds of lightly pruned bushes in the same district and the verdict must be given in favour of the hard pruned ones. Before adopting such a drastic method of pruning I should first, however, prefer to give the plan a trial, and till proven shall continue to prune moderately hard only. By moderately hard I mean the free removal of all spray, the shortening back of growths no stouter than a slate pencil to the second joint, those of the thickness of a lead pencil to the third or fourth bud, and any still stouter to a length of 12 inches to 18 inches. I hold it to be a mistake to be more lenient with Teas than Hybrid Perpetuals, as the aim with the former should be to promote the growth of extra strong young shoots from the underground portion of the stems, these branching and flowering grandly long after the single blooms from small wood are over. Standards generally should also have daylight let into their heads, the rather severe thinning out of the more dense being followed by a foreshortening of straggling growth and the free shortening, as advised in the case of bushes, of the rest. Nor ought those growing against walls to be neglected or wholly escape the pruning knife. Very many of these are in a dead or dying state, and it may be a wholesale removal of dead wood will be all the pruning necessary. Teas in these positions I would, for reasons just given, prune freely. Even the vigorous-growing Gloire de Dijon, Mme. Berard, and Reine Marie Henriette pay for thinning out, some few of the strong branches being well shortened back. Not only does this tend to keep up the vigour of the trees, but the early-formed long and strong branches of the first-named in particular will flower at nearly every joint before the season is over. Lamarque if somewhat hard pruned will produce great branching heads of pure white bloom, and the good old Celine Forestier also pays for being freely pruned. Another newer and popular Noisette, William Allen Richardson, is a strong grower, and most of the branches should only have the unripened ends cut away, and lovely buds will then be produced throughout the reserved portions. In the more favoured districts these long branches may be cut back directly after they have ceased flowering, and fresh growths will then be had for the following year, but, as a rule, thinning out this as well as L'Idéal, a rival of W. A. Richardson, is the best plan, as this leads to the production of quite as many young growths as are needed. Maréchal Niel has been very hard hit, but those who have strong young growths still alive should treat these as advised in the case of the other Noisettes.

Now that there can no longer be any doubt about the losses, owners of gardens are inquiring whether it is too late to replace those that are dead. My advice has been to procure bushes at once, planting and pruning these at the same time. These late-planted Roses, being moved just when top and root growth is commencing, will most probably succeed well, but not if their owners or those

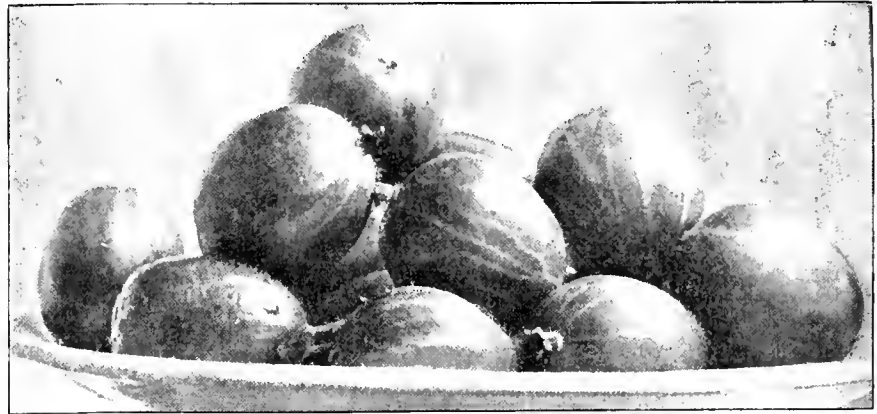
responsible neglect to prune them. It is also of the greatest importance that they have the benefit of a fairly rich, fresh, loamy compost, as it is very certain they will fail in stale soil. Failing to change the soil has led to innumerable failures, and so also has high planting. All dwarf Roses are worked, that is to say, either budded or grafted on to Manetti, seedling Brier or other stocks. All, too, are liable to push up suckers very freely, these, if not detected in time, soon ruining the Rose worked on the original stem. The Manetti stem in particular requires to be buried, and this should be done in all cases, sinking the point of union of stock and scion 3 inches below the surface. This comparatively deep planting does not greatly militate against good root-action, and is partly recommended with a view to causing the Rose or scion to strike root or "root off," thereby becoming in time quite independent of the uncertain stock. Once a Rose is well established on its own roots it is an advantage rather than otherwise for suckers to be thrown up, these eventually taking the place of worn-out older wood. Vigorous dwarf Roses give plenty of wood for propagating purposes, well-matured young wood cut into lengths of about 12 inches and inserted firmly and to half their depth in good strong soil striking, as a rule, quite as surely as Gooseberry or Currant

of Roses, not too rampant in growth, though it will clothe a pillar 10 feet high and flower freely from its base to its full height.—J. C. TALLACK.

## ORCHARD AND FRUIT GARDEN.

### WELL-FLAVOURED GOOSEBERRIES.

THE Gooseberry is valued by those who have not a large quantity of glass to grow choice fruits. It is equally as delicious as any forced fruits when due attention is given the trees in the way of food and protection from insect pests. There is not sufficient attention paid to the trees even in large gardens. They are not given enough room or food and occupy the same ground too many years. Even when badly treated the Gooseberry produces fruit in quantity, but smaller and not well flavoured. This latter point deserves more attention, as though size is meritorious, the flavour of some varieties is equal to that of the best forced fruits grown. Of late years, with extended fruit culture, this fruit has received more at-



*Gooseberry Dan's Mistake. From a photograph sent by Mr. T. Pimlott, Whirley Road, Long Moss, Macclesfield.*

cuttings. The autumn or not later than the middle of November is the proper time to put in these cuttings. A ROVER.

**Own-root Roses.**—The advantages of growing many Roses on their own roots will be well shown this year. To-day (April 3) I have been pruning the H. P.'s, and have had the satisfaction of finding that all dwarfs on their own roots are looking well and breaking strongly. Pruning has to be more severe than usual, most plants having to be cut back nearly to the ground level, but beyond this no harm has been done to the dwarfs, and with a genial spring strong growth appears certain. With standards appearances are entirely different, more than 90 per cent. being killed outright, and on the few that have escaped with their lives future growth cannot be satisfactory. Outside appearances are deceptive, as the stored-up sap is causing buds to shoot from young wood which cannot possibly support them, as the old stems lower down are quite killed. On the walls some few climbing Roses are looking as if they may recover without being cut hard back to the ground, but the more tender kinds, such as Maréchal Niel, W. A. Richardson, Devoniensis, Lamarque, and the Banksians, are killed to that point, and there is no need for hesitation in pruning them. Most pillar Roses are spoiled for this year. I take this opportunity of again recommending Vivid for this work, as it is almost the only one that appears unaffected by the frost. It is one of the freest flowering and sweetest scented

cuttings, and we have had some very fine exhibits of over 150 varieties staged, giving those interested an opportunity of seeing the cropping qualities, colour, and testing the flavour. I do not advocate quantity or variety, as most Gooseberries fruit freely, indeed too freely if they are required for dessert. Thinning is a tedious process, but the fruits thinned may be used. The trees benefit, and there are few fruits more profitable at the time. Should quantities be grown, there is always a ready sale. Many of the best varieties, those which produce large berries, are bad growers, and without attention in the way of pruning, thinning, or supports, a large quantity of the fruits is spoiled by coming into contact with the soil and is soon devoured by slugs. Few fruits are more appreciated by the larger birds when ripe, and the buds in the winter by the small finches and sparrows, so that to obtain good fruit one must adopt protective measures. I recently saw a model fruit garden at The Hendre, Monmouth, the Gooseberry trees being covered over with wire netting and occupying a space between larger trees, such as Cherries. Some of the best kinds had been selected, flavour being the first consideration.

This mode of culture is to be recommended, as if the cost of temporary protection be taken into consideration and the greater facilities



combined with neatness and other details, a permanent protection made with strong iron supports and 1-inch mesh wire is worth adopting. Delicious fruits may then be had much later than one can obtain from trees netted in the open, as when closely netted there is not enough exposure to preserve the fruits. The small dessert kinds must not be overlooked when flavour is required, and these are most subject to the depredations of birds. Such kinds as Early Sulphur, Golden Drop and Transparent, when the trees are well fed, are superior to those one usually sees grown in the ordinary way.

For large fruits the one illustrated, Dan's Mistake, is one of the best kinds grown. It is noted for flavour and cropping; indeed, on our light soil it is the best cropper when size is considered. There are others equal in flavour, but I know none superior of the larger section. This variety is a special favourite in the Lancashire districts, and one often sees it exhibited at local shows in splendid condition. To obtain size, thinning is necessary. Dan's Mistake is a large red fruit slightly covered with hairs, and when fully ripe keeps a long time if the trees are not much crowded. It may not be considered the most profitable kind, as Whinham's Industry is a better cropper and for early fruits superior. Whinham's grows freely in a young state, and I find it our best fruit for gathering when green. The desire to have fruit for tarts or pies at Whitsuntide is still observed, and though impossible to obtain in certain seasons, the newer introductions are most useful for that purpose, as they swell quickly after the flowers set. Such varieties as that illustrated are specially suitable for cordon training. The growths of some of the larger kinds is not so robust as one could wish, but grown as cordons, one can feed freely then and expose the fruits so as to obtain flavour. The trees, too, take up less space and can be readily protected. The cordon mode of culture is worth a trial where Gooseberries are liked for the dessert, but it is well to plant strong trees that have been specially prepared for cordon training, as if bushes are cut back to one growth, the following season they produce so many shoots at the base that the leader does not make much progress. For dessert, flavour being considered, such kinds as Green Gascoigne, Ironmonger, Leader, Red Champagne, Alma, Lady Leicester, Keepsake, Telegraph, Speedwell, and those named previously are all worth special cultivation. G. WYTHES.

**Pear Chaumontel.**—I must plead guilty to being one of those people who have not tasted a good English grown Chaumontel Pear, but, on the other hand, I have grown magnificent fruit to look at. The climate and soil must be very favourable indeed for this Pear to come of good table quality in Britain. I did hear of isolated cases, where the Chaumontel is still grown, of its being of very good quality in the abnormally hot season of 1893, and if such seasons could be more frequent, we might look upon the Chaumontel as being one of our best Pears. I have had sufficient experience in the culture of Pears to also know that outward appearance is no criterion of quality. It was, therefore, a surprise to me to read in "W. G. C.'s" note "so many gardeners are enabled to produce Chaumontel Pears that would be no discredit to the Channel Island growers." If there is any secret connected with its good culture other than a very favourable climate and soil, possibly some of these successful growers will kindly give their experience.—Y. A. H.

**The Glastonbury Pear.**—Judging by the interesting account given in THE GARDEN by Mr. J. A. Porch of the Glastonbury Pear, season makes a wonderful difference in its quality, and

which probably is the reason of this trait being so bad last season. My experience, however, is but slight. Last November Mr. Coleman and myself, who were judging the principal fruit classes at Hereford, came across this Pear in a collection, but it was a stranger to both of us. Being, however, of fine appearance, and as we were on the look-out for quality, the fruits were cut, when the quality proved as bad as it possibly could be. The exhibitor afterwards told me we could not have tried a worse one, but being short of a variety he put it in. I do not wish to doubt the authority of the gentleman named in speaking up for its quality, but it only shows what a variable fruit the Pear is as regards season and climate, and proves how careful one need be in selecting Pears for quality to be depended upon annually.—A. YOUNG.

**Colour in Apples.**—"E. M.'s" note on colour in Apples is very interesting, and proves conclusively, what has hitherto been published in the pages of THE GARDEN, that high colour is influenced considerably by the constituent portions of the soil. Even if these have to be added artificially, as has been done in the garden which "E. M." quotes, it only goes to prove the truth. Quoting from memory, I think it was Mr. Roupell who exhibited before the Royal Horticultural Society fruits noteworthy for their high colour, the result of supplying to the soil those constituents which the results achieved proved the soil was deficient of. It is also a well-known fact that Apples noteworthy for high colour are invariably produced from those soils where iron is present in quantity sufficient for the purpose—the red sandstone of Herefordshire, for example. If it can be further demonstrated that the application of sulphate of iron and soot will materially increase colour, it is well worth our future consideration.—Y. A. H.

**Temperatures for setting Grapes.**—The article by "W. G. C." suggests a few notes on temperatures, as he places these in rather a secondary position. It is quite right, however, that temperatures, however stated, will avail but little if the roots are not in a satisfactory state. According to my experience the state of the weather at the period the Vines are in flower is the best gauge of the temperature to maintain. Like "W. G. C.," I remember an instance, and which I have previously mentioned in the pages of THE GARDEN when writing upon the subject of setting Grapes, of a splendid set of Muscats under a low night temperature, but the days were very bright and warm, hence the difference. If, on the other hand, the days had been dull the results would have been disastrous. I had evidence of this last season, not with Muscats, but with such a speeded free-setting Grape as Black Alicante. For some cause, which I need not explain, the temperature on two nights whilst the Vines were in full bloom was low in the morning. I expressed my fear of the results which would accrue at the time and which proved correct. Small globules of moisture were seen condensed on the stigmas, and which was the result of too low a temperature at night. The days which followed were very dull and wet, and the result was that quite three parts of the berries were stoneless. My advice is to keep up a warm, buoyant temperature at night whilst the Vines are in flower in case of any mishap. The ill effects of a low temperature are perhaps seen more on cold soils than light and sandy soils. Lady Downe's is a Grape which also requires a warm, buoyant atmosphere, and so also do all varieties of Grapes which are notoriously shy setters.—Y. A. H.

**Protecting Gooseberries.**—I have known whole quarters cleared in the neighbourhood of towns by the sparrows; indeed, I have this season during the severe frost been obliged to entirely net over the best bushes. Currants have suffered equally with Gooseberries. Once the birds start on a quarter they clear the trees before they go to fresh ground. Such well-known remedies as lime freshly slaked and dusted over the trees in my case are powerless to prevent their depredations.

A gun will be of great service, destroying a few and frightening many. Bullfinches are also very destructive, and unless checked will clear a quarter in a short time. Those who can afford to erect a permanent cover in the way of galvanised wire netting, using a three-quarter inch mesh, with strong poles as supports, placing the netting at a height of 6 feet from the soil, will find it most advantageous. It may not be thought necessary to cover the top with wire, as nets may be used, but wire is preferable and not expensive.—W.

#### PEACH BUDS DROPPING.

I AM unable to agree with Mr. Douglas (p. 193) that the cause of bud-dropping is partially due to imperfectly developed and badly ripened wood, loss of leaves by insect pests (that is neglect whilst in active growth), and over-dry borders in winter. If I remember aright, Mr. Crump treated on this subject a year or two ago, and several interesting notes appeared from good growers who would soon have remedied the evil if bud-dropping was caused by the agencies described. A few seasons ago, being a sufferer from the same, I naturally read Mr. Crump's note with interest, and was glad to see he did not put down the cause to the evils described in Mr. Douglas's note. I believe such causes to be hereditary, as I notice there is more trouble with some of the newer American varieties than others. Another cause, and one I plead guilty to, is keeping our Peach houses too close at a season full exposure is necessary. Many gardeners take advantage of the leaves being cleared from their early trees to house Chrysanthemums, and the house is not treated like a fruit house at rest, but more care is bestowed on the temporary occupants, to the disadvantage of the fruit trees, and at a time every bit of air and moisture should be admitted. I again refer to the first point, badly ripened wood, and there was little fault to find with the wood last spring, the previous season being all one could wish in this respect, and yet the buds dropped. Then Mr. Douglas may say it was because the trees lost their leaves prematurely owing to the pests he named. Such was not my case; everywhere the wood was thin and, of course, fully exposed, and with early forced trees in such a season as 1893 there was little need of artificial heat to ripen the wood. With later trees it may be necessary, but so far I have failed to see any bud-dropping in their case. I never fear the second or third houses; it is only the earliest. Others may have had a different experience, but such is mine. I now come to dry borders. We have been told dry borders were the cause of bud-dropping for so many years. I am inclined to think we have in most instances taken good care to be on the right side; indeed, I know one man who always empties his tanks fortnightly, having a regular supply of water, after being told the cause of failure or dropping was through dryness, and still they drop; hence my opinion as to some kinds being worse than others. I am inclined to think that gentle forcing is as great a preventive as giving so much water. We have the same trees in later houses with same treatment and they do not drop at all. These American kinds bloom very erratically, I admit, and my advice is to force slow, and in the case of kinds like Early Alexander to grow it sparingly for hard forcing, as with well-ripened wood and clean foliage (the wood laid in thinly)—indeed, one cannot help doing this, as there was no need of dis-budding—and copious supplies of water, we failed to prevent bud-dropping, and, being so annoyed, I as a last resource got rid of the kinds which dropped. This season the young trees have not lost any buds, the varieties being Early Grosse Mignonne (this must not be confounded with Grosse Mignonne), Hale's Early is free of dropping, and Dymond, with older kinds. I specially name Grosse Mignonne, as there are some bad varieties of this good Peach, the one named forcing freely. I am at one with Mr. Douglas in his note with regard to other points of culture, but I am loth to admit blame for bud-dropping, having tried all

the remedies he advises, and others being in the same state, we do not like to admit, although he wishes us to do so, that we bring the trouble on ourselves.—PEACH GROWER.

—Surely Mr. J. Douglas (p. 193) cannot be in earnest in the opinion expressed by him with regard to the cause and remedy for bud-dropping in Peach trees. If so, he certainly cannot have grown the early American varieties Alexander and Waterloo, or he would not so easily have found a perfect remedy. Mr. Douglas gives as reasons for the failing, imperfectly developed and badly-ripened wood, owing to the premature destruction of the leaves by red spider, aphid, or mildew, aggravated by lack of heat after the fruit is gathered. We had trees of both these sorts in the early house and one of Alexander in a successional house, and in each instance bud-dropping has been an annual source of trouble, although not subject to the attack of any of the diseases mentioned in Mr. Douglas's note. Bad wood ripening certainly ought not to be known in trees which perfect their crop early in May, especially where ample ventilation and fire-heat are provided and in structures glazed with large squares of clear glass, and yet under these conditions Alexander was such an offender this season as to merit its dismissal from its position which it has now occupied some five or six years, to be replaced with another which it is hoped will prove a more reliable sort. The two trees simply changed places from a cold unheated house to the early one, and *vice versa*. Here they will have an opportunity of getting inured and established for bearing next year. In our early house there are Early Beatrice, Grosse Mignonne, Bellegarde, and Dunmore Peaches, Lord Napier, Early Rivers, and Elruge Nectarines, and in none of these are there any symptoms of loss through premature bud-dropping, but, on the contrary, they require severe thinning of the unexpanded buds to relieve the trees of the strain. If bad wood ripening accounts for such failings as noted in the American sorts, why is it English varieties are not affected by it when subject to exactly the same treatment in every detail? Mr. Douglas assumes that it is not difficult to apply a remedy, but I am certain many growers besides myself would be grateful to him if he would furnish a permanent remedy for such a troublesome failing. It cannot be other than regretted that such desirable Peaches as the two offending sorts named should be given to such a deceptive trait, because they are so fine, handsomely coloured and early, but in early Peach forcing where these are depended on there is sometimes great disappointment and loss experienced at the flowering period. Quite recently this subject was exhaustively dealt with by your able correspondent "W. I.," and his experience gained under a rather extensive trial might be taken as conclusive and thoroughly trustworthy. My experience exactly coincides with his in the failure of these early Peaches to retain their buds. Aphides, red spider, and mildew were unknown to our trees last season, and they neither lacked moisture at the root nor attention to thinning out the bearing wood as soon as the crop was gathered, yet in spite of all this failure as recorded was our only return. In my opinion it cannot be other than a constitutional weakness, and one which apparently they do not overcome with age and acclimatisation—at least as forcing varieties. Outdoors no such trouble is experienced, nor do I think it will give much anxiety in cold houses, but as I have not yet proved them under the latter course of treatment I cannot speak positively, but I hope to do so in the course of a year or two, as both are now included in the cool house selection.—WILTSHIRE GARDENER.

**Strawberry Scarlet Queen.**—I was pleased to see the note on the above on page 216. It is one of the new varieties we have had very little information about, and "J. C.'s" commendation at this season is opportune, as everyone who forces is anxious to know what merits these new kinds possess before going largely into their culture. I am of the same opinion as "J. C." as regards earli-

ness, and when forced it is much superior to Noble; and, considering it is a seedling from Noble, with King of the Earlies as the male parent, one may expect good flavour, as King of the Earlies is noted for that quality, but is too small when forced to be much of a favourite. "J. C." describes it well when he states, as regards size, it is smaller than Noble, but it is valuable as a free setter and for its good clean growth. I can testify to its good eating qualities when hard forced, and I should say it will make a favourite market variety. Last season I grew it for the first time and was much pleased with its bright vermilion-scarlet fruit, and being a firm berry it may be packed for long distances, as it travels grandly. Its rich, Queen-like flavour should make it valuable where quality and not mere size are considered.—W. S. H.

**Raspberries.**—No time should be lost in pruning old plantations and placing the canes in position for fruiting. Newly-planted canes do best pruned to within 6 inches of the soil. I advise



*Vitis heterophylla humulifolia.* (See page 250.)

removal of the old canes as soon as the fruit is gathered, but if neglected no time should be lost in thinning, leaving from three to five canes to a stool. It is also a good plan to cut down the fruiting canes to a height of 3 feet or 4 feet, as if strong and not too long very little support is needed. After the canes have been tied a good mulch of decayed manure should be placed along the rows or directly over the roots. In gardens where Raspberries do not thrive it is well to make new plantations more frequently and feed more. Autumn fruiterers should be cut down and manured freely and the new growth kept thinned.—B. M.

**Strawberries.**—I never saw the plants look so bad as they do at the present time, the leaves being quite destroyed as well as many surface roots. Though the crowns of strong plants are uninjured,

the loss of top or leaf growth will cause a later growth. The ground should be cleaned between the plants and on poor land a dressing of soot, guano or decayed manure should be lightly stirred in. Previous to this the plants should be well trodden round, as the frost will have lifted them out of the ground. In giving manure either in a liquid or other state, it is well to keep it free of the crowns. In the case of newly-formed plantations only a surface hoeing is necessary, as the firmer the root-hold the plants have of the soil the better they bear. Plants that have been wintered in rows close together for spring planting should now be set out in their permanent quarters in deeply-dug, well-enriched soil, planting firmly and giving strong-growing varieties more space, as it is an easy matter to crop between this season with dwarf growing vegetables.—G. WYTHES.

#### STATE OF APPLE TREES.

OWING to the long spell of wintry weather very much of the time annually spent upon the fruit trees will have of necessity to be considerably curtailed. If this results in the neglect of pruning wall trees, then I have nothing but regret to express, especially if it be the growths on the main branches of Apples, Apricots, Cherries, Pears and Plums that are allowed to go untouched. Of what use is half the walls in the country, seeing that already the spurs on the trees against these stand out to a distance of 9 inches or more? If, on the other hand, shortness of time leads to the neglect—or what is felt to be such—of pruning trees, notably Apples and Pears, quite in the open, there is every likelihood of this turning out advantageously rather than otherwise. Lately I have critically inspected hundreds of garden trees, and, I trust, have done good work in the direction of preventing so free a use of the knife as formerly. In innumerable cases trees are planted in good garden soil previously only devoted to vegetables, and which are still to be principally cropped with these. The Apple or other fruit trees are not to occupy much room—in fact, are to be fruited *à la Rivers*, without, however, adopting the practice of annually or biennially lifting; and the owners are not a little disappointed with the result. Unless the trees, or bushes, as these may be termed, become stunted from the first, the crops of fruit are very light indeed, while those that grow strongly give a very plentiful crop of branches every season.

So very stout and coarse do these much-pruned trees become, that it is doubtful if severe root-pruning would do more than throw them into a stunted, half-dead state; whereas a different method of pruning would bring them into a most productive state within two years of the change being carried out. At the present time there are so many instances of good results following upon what, in very many cases, was thought to be a neglect on the part of the pruner, that the lesson ought not to be forgotten. Wherever strong growths formed during 1893 were left their full full length, these are now bristling with fruit buds. So well did the wood mature, that growths exceptionally stout and long and not crowded promise soon to be wreathed in flower; and, as a matter of fact, I never saw freely-grown Apple trees in a more promising state. Instead, therefore, of annually backing off all the young growths of garden trees, the better plan would be to freely thin out and leave the rest to their full length. This may mean a considerable increase in the size of the trees, but what of that? Either they are worth this extra room, or they ought to be rooted out altogether. Dotting them about highly cultivated ground was a mistake in the first instance,

but when trees can be so quickly brought into a free-bearing state, they must prove far more profitable than vegetables, and it is the latter that should make way for the trees, and not the trees for the vegetables. Latterly I have repeatedly pointed out to amateurs and cottagers how unwise they are to cut and hack about their trees just because they happen to overlap some of their vegetable ground. By all means thin out crowded trees, but think twice before starting upon wholesale lopping.

Among the coal miners in this district are some hard-working, painstaking men who take a particular pride in their gardens. Not having sufficient confidence in their own ability to prune bush or low Apple trees generally, they engage the services of a so-called "experienced pruner." I call him a "tree spoiler," and there are far too many of this class of men in existence. When they come to a tree they are afraid to prune very severely; they have not the sense to thin out where necessary and leave the rest of the growths to their full length, nor will they freely cut back a newly-planted tree. What they do is to merely top the growths and leave them, this being far worse than no pruning at all. A topped growth breaks near the cut ends, and very frequently the lower half or more fails to push either a fruit or wood bud, remaining quite naked for the rest of its life. Either these growths should be cut back hard enough to cause a strong back break of shoots, with perhaps an occasional fruit bud or spur, or else not cut at all. The former plan is desirable when the foundation of a tree has yet to be laid, but when fruit is the chief desideratum, then allow a natural distribution of sap and a natural break, this meaning fruit buds in quantity. Pears, in spite of the heavy crops produced last season, would, but for the birds, have flowered freely in many gardens, but as yet the Apple buds are quite safe, and if we only experience a favourable spring, abundance of Apples should be forthcoming. It is only fair to add that the pruned trees also promise well, but more naturally grown trees are particularly promising, and, it is almost needless to say, will produce, weather permitting, much the heaviest crops of fine fruit. W. IGGULDEN.

Somersct.

## SOCIETIES AND EXHIBITIONS.

### ROYAL HORTICULTURAL SOCIETY.

APRIL 9.

THERE was a considerable increase in the amount of tabling at this meeting, but Orchids were again the most attractive feature, although not so many certificates were awarded. From the Burford Lodge collection came a huge specimen of *Cattleya Lawrenceana* in the finest possible condition, a notable example of high-class cultivation. Several fine forms of *Odontoglossum* were to be seen, especially in varieties of *O. triumphans*, that to which a first-class certificate was awarded being in every way deserving of that distinction. *Miltonia Bleuana nobilior* was also shown well. *Cattleya Schroderae* was likewise worthy of note, two excellent specimens of this charming variety coming from St. Albans, from whence was sent a most vigorous example of *Phaius Sanderianus*. Several hybrids of Veitchian origin were present, *Laelia Latona* and *Laelio-Cattleya Pallas superba* being very fine. Several botanical curiosities were sent from the Tring Park collection, of which note will be found. A few splendid forms of *Amaryllis* were sent from Chelsea, and others from Holloway, from whence also came *Clivias* of the best kinds. One of the features of the meeting was undoubtedly the many choice and particularly fine varieties of the *Anthurium*, forms of *A. Scherzerianum* and *A. Andreanum*, in which was likewise evinced the best possible culture. These comprised plants as well as cut spathes. Cut Roses from the point of popularity and attractiveness were particularly good, those

from Colchester being the finer exhibit, but many blooms in both stands were fully up to the exhibition standard. Violets as fine as one could wish, with delightful fragrance, were sent from Swanley, whilst from Cheshunt and Tottenham came hardy herbaceous and alpine flowers in the best varieties. A good collection of *Dracanas* of the newer kinds was staged. What, however, in all probability created the most interest was the seven fine plants in profuse flower, one mass of rich orange colour, of *Streptosolen Jamesoni*, from Mr. Bennett Poë, finer examples than which have never before been seen. Daffodils were to be seen in the best varieties—new and otherwise. *Beaumontia grandiflora* was again shown from Panshanger, where it is so well grown. A thoroughly representative collection of vegetables in season, forced and otherwise, came from Syon, from whence also were sent highly-coloured *La Grosse Sucrée* Strawberries; otherwise there was but little for the fruit and vegetable committee to examine.

### Orchid Committee.

A first-class certificate was given to—

*ODONTOGLOSSUM TRIUMPHANS* LIONEL CRAWSHAY, which in the opinion of many was considered to be the finest variety yet seen of this well-known *Odontoglossum*. It has particularly broad sepals and petals, almost twice the width of ordinary forms, the ground colour of old gold being relieved with dark Oak-coloured blotches, the entire flower of fine form and substance and the growth dwarf and compact. From Mr. De Barri Crawshay, Rosefield, Sevenoaks.

Awards of merit were given to—

*LAELIA FLAVA* VAR. *AURANTIACA*, an intensely rich marked form of this Brazilian species, with deep orange or cinnabar-coloured flowers borne in a cluster at the top of a slender spike as in the case of the type, each bloom about 2 inches across, the spike in question having nine such blooms. From Lord Rothschild, Tring Park, Tring

*ODONTOGLOSSUM CRISPUM* CATHERINE, reported to be a good form, but not *en evidence*, having, it was stated, been removed at or soon after the rising of the committee. No description can thus be given. From Mr. F. Hardy, Ashton-on-Mersey.

Botanical certificates were awarded to *Masdevallia ludibunda*, quite a miniature species of botanical interest possibly, but of no particular beauty. From the Royal Botanic Gardens, Glasnevin. *Bulbophyllum nigropetalum*, a singular-looking species with dark-coloured flowers, was also given a botanical certificate. From Messrs. Lewis and Co., Southgate.

Sir Trevor Lawrence sent a grand specimen plant of *Cattleya Lawrenceana* bearing about one dozen spikes, the finest of which had as many as eleven flowers fully developed, each spike forming quite a bouquet of bloom; the variety also was a good one and of deep colour (award silver Flora medal).

Messrs. J. Veitch and Sons had a choice selection of their own hybrids and of species from various genera, including another very fine example of *Cymbidium eburneo-Lowianum*, which one does not tire of seeing. The plant in question was a very vigorous one, bearing two fine spikes of large flowers in their best condition. *Laelia Latona* (*L. purpurata* × *L. cinnabarina*), with rich orange-coloured flowers, a choice hybrid; *Cypripedium Cleola* (*C. Boissierianum* × *C. Sehlmi album*), which might appropriately be called *C. Sedeni album*, its flowers being much in the way of the last named hybrid, save in colour; *Dendrobium atro-violaceum* in good character, *Cattleya Schroderae*, a fine form with broad petals and a dark golden blotch on the lip; *Odontoglossum Ruckerianum*, of which two distinct varieties were shown, one of these bearing a stout branching spike; *Angraecum fastuosum*, a charming dwarf species with the purest of white flowers, nestling close to the foliage; *Cattleya Trianae delicata*, a very handsome form, slightly flushed in the sepals and petals, with the lip similarly tinted and finely fringed, the deep gol-

den blotch being well displayed. *Odontoglossum crispum* with *O. Roezli* (*Miltenia*) were also included. *Masdevallia ignea*, of which a profusely flowered plant was to be seen; *Cypripedium caudatum* (*Luxembourg var.*), with a stout tall spike bearing fine blooms, in the sepals of which there was apparent a deep golden yellow marking towards the points; and *C. macrobilum*, with two large blooms, were also shown. *Dendrobium Alcippe*, with dark purplish tinted flowers; *Odontoglossum Rossi majus*, a large form, with finely marked blooms; *O. Roezli album*, very pure; *O. Pescatorei*, a pure white form quite devoid of spots, very delicate and beautiful, the plant bearing a splendid spike; *Dendrobium Farmeri roseum*, prettily tinted; *Cattleya Lawrenceana*, *Cypripedium Winnianum* (*C. Druryi* × *C. villosum*), with the form of the former and more of the colour of the latter parent; *C. obscurum*, a hybrid showing some affinity to *C. Crossianum*; also *C. Argus* and *Dendrobium crassinode*, well flowered, with a small example of *D. Hildebrandi*, a pretty, but not a showy species, were also sent (silver Banksian medal).

Messrs. F. Sander and Co. put up a very meritorious and effective group comprising *Dendrobium Brymerianum* with particularly fine flowers, having the papillose fringe in excellent character; *D. dioxanthum*, pale golden yellow, rather small, but quite distinct; *D. Phalenopsis Schroderianum*, of which two unusually stout and vigorous plants were shown, each bearing several spikes in various stages upon the imported bulbs, these in one case measuring 2 feet 6 inches in length with the ends of the old spikes in numbers upon each; and *Celoglyne lentiginosa*, in the way of *C. barbata*, but more vigorous. *Cattleya Schroderae*, of which two splendid examples, quite specimens, were exhibited, one, growing upon a raft, having fourteen blooms, and another in a pot a larger number still; these two plants displayed the beauties of this delicately tinted *Cattleya* to perfection; *Dendrobium Auguste Victoria*, one of the tall-growing species, having bulbs 5 feet long with spikes nearly 2 feet in length and nearly erect, each spike having a profusion of small white flowers (as many as thirty) of singular beauty; *D. amboinense*, very singular and pretty; *Oncidium Rogersi* in its characteristic rich colour; *Eulophiella Elizabethae* with five spikes, a very healthy plant; *Lycaste Skinneri* in its best forms and of deep tints; *Spathoglottis aurea*, a stout example, also *S. plicata* with deep lilac-purple flowers, quite a contrast to the foregoing; *Odontoglossum crispum*, a delicate tinted form, suffused with purple, but void of spots in a marked degree, the spike a fine one; *O. nevadense* and *O. triumphans*, each in good character, were also shown; *Phaius Sanderianus* was represented by a most vigorous example bearing one strong spike more than 6 feet in height, with only the first few flowers as yet expanded. This is a distinctly noble species, having dark lustrous brown sepals and petals, with the lip at first white, turning with age to a pale golden tint. *Cyrtopodium Woodfordi* had a spike of greenish flowers, the spike nearly as long as in the preceding (silver Banksian medal).

Mr. Pitt, Stamford Hill, sent a well-flowered group, comprising two good examples of *Vanda suavis*, each with two strong spikes; *Angraecum Sanderianum*, *A. sesquipedale*, the latter with fine flowers, very pure in colour; *Odontoglossum Roezli* and its white variety; *O. crispum*, deep in colour; *Laelia harpophylla* with six spikes; *Cymbidium eburneum* in good order; *Cypripedium Chamberlainianum* and *Dendrobium thyrsoiflorum*, in all a pretty group (silver Banksian medal).

Messrs. Lewis and Co., Southgate, sent a good assortment well arranged, comprising a dark form of *Odontoglossum triumphans*, a good variety of *O. hystrix*, *Cymbidium Lowianum* (*Southgate var.*), with brighter sepals and petals; *Trichopilia suavis*, with very large and finely-marked flowers; *Masdevallia Houtteana*, in profuse flower and of dark colour; *Odontoglossum laeve superbum*, with dark sepals and petals and a lilac tinted lip; *O. Andersonianum album*; *Dendrobium Brymeri-*

anum, good; and *Cattleya Trianae*, in capital variety (silver Banksian medal).

From Baron Schröder came the original and true form of *Cattleya Lawrenceana*, very rich in colour, notably the lip; also another and much paler variety, pale mauve in colour, with white marbling and an entire absence of the purplish crimson on the lip; and yet another—*C. Lawrenceana Vinckii*, better defined as *violacea*, it having pale violet-tinted sepals and petals and a dark, clouded violet blotch on the labellum; also a vigorous little plant of *Dendrobium Cybele* (*D. Findlayanum* × *D. nobile*), a superb hybrid of the first rank, the lip of which is strikingly fine; and a three-branched spike of *Odontoglossum Ruckerianum* of deep colour. Mr. Statter had *Laelio-Cattleya Pallas superba* (*Laelia crispa* × *Cattleya Dowiana*), with blush sepals and petals, and an extra large elongated lip of deep violet-purple, the golden veins, so characteristic of *C. Dowiana*, being greatly subdued; *Cypripedium selligerum atro-rubens*, a very dark form of sturdy growth, bearing two spikes; *Cattleya Schröderae splendens*, with a deeper tint of rosy pink on the lip, setting off the golden blotch on same to good advantage. A good variety of *Cattleya Mendeli* was also to be seen here. From Mr. De B. Crawshaw came *Odontoglossum crispum* var. with pure white sepals and petals and spots and blotches of the palest chocolate. *O. gloriosum* (Rcsefield variety) also came from this source. Mr. F. Hardy showed *Odontoglossum polyxanthum* (Hardy's var.), a distinct form with larger flowers, well marked, and of extra size. From Lord Rothschild's collection was sent a *Cypripedium* (nat. hybr.) having a decided relationship to *C. Chamberlainianum*, with the same peculiar twists in the petals, the lip being more wedge-shaped and the dorsal sepal with less green in it; presumably it is a form of the species named. Sir Trevor Lawrence staged a fine example of *Miltonia Bleuana nobilior* with extra large flower the size of those of *Miltonia vexillaria*, with much of the character of those of *M. Roezlii*. *O. aspersum violaceum* came from the same source; also *Masdevallia leontoglossa*, quite a dwarf species. From the same collection was sent *Eulophiella Elizabethae*, bearing a good spike; also *Cypripedium Rothschildianum*, with three grand blooms on the one spike, and the pretty hybrid *Epidendrum Endresio-Wallisii*. From the Royal Botanic Gardens, Glasnevin, were sent *Phaius assamicus* and other Orchids. Messrs. Drover, Fareham, sent *Cattleya Trianae* Princess Beatrice, with large, somewhat loose flowers; also a small-flowered plant of the type. Mr. Raphael, Castle Hill, Englefield Green, had the finest spike of *Eulophiella Elizabethae* in the show, with twenty nine flowers and buds. A grand example of *Cattleya guttata* Prinzi came from Tring Park. This form has larger flowers, with a much lighter or creamy ground colour spotted profusely with bright rosy purple, the growth being very vigorous. *Laela crispilabia* was also sent. It is of the *L. flava* type, but with rose-purple flowers. *Dendrobium tetragonum*, an Australian species; *Bulbophyllum nigropetalum viride*, a small, but most interesting species; and *Catasetum* sp. were included here. Major-General E. S. Berkeley, Spetchley, sent a fine young example of *Dendrobium Rolfe roseum*, tipped with bright purple, the lip of a light creamy shade having a trace of purple at the margin. Mr. Smee, The Grange, Carshalton, sent a very fine variety of *Cymbidium Lowianum* called *viride*, bearing a splendid spike of eighteen flowers in which the crimson of the lip, as in the type, is entirely absent. The sepals and petals are of a lighter shade, whilst in the lip is a trace of pale yellow.

#### Floral Committee.

A first-class certificate was awarded to—

*ATACCA CRISTATA*.—A curious plant of weird aspect, having flowers of a shining purple-brown colour, borne in thick clusters at the top of a stout stem, with long thread-like appendages hanging down between them. Its leaves are

large and handsome, and the specimen was a fine one. A good illustration of this singularly quaint plant was given in THE GARDEN of July 17, 1886. It was exhibited by Sir Trevor Lawrence.

Awards of merit were granted to the following:—

*AMARYLLIS DORIS*.—Another of the deep self-coloured kinds which it is satisfactory to note are encouraged. This variety has fine flowers, the petals broad and of a rich crimson colour throughout. From Messrs. J. Veitch and Sons, Chelsea.

*AMARYLLIS CHIMERE*.—This variety shows a marked advance towards scuring an *Amaryllis* with pure white flowers, this colour quite predominating, varied only by a few slight feathered bands of red, the flower of large size. This also came from Messrs. J. Veitch and Sons.

*CLIVIA* RIGHT HON. J. CHAMBERLAIN.—A good variety, with a large truss of brightly coloured flowers. There is a great similarity in all these named forms of *Clivia*, their differences being merely a slight shade of colour or a little extra breadth of petal. Shown by Messrs. J. Laing and Sons, of Forest Hill.

*SAXIFRAGA BOYDI ALBA*.—A charming addition to the early spring-flowering Saxifrages and a gem for the rock garden, in habit identical with *S. Boydi*, of which a coloured plate was given in THE GARDEN, July 5, 1890. Judging from the example shown it blooms profusely. Exhibited by Messrs. Paul and Son, Cheshunt.

*ANTHURUM COMPACTUM*.—A variety with distinct merits, indicated by the name it bears, and shown by Sir Trevor Lawrence.

Miscellaneous exhibits were varied and of a most instructive character, especially the group of hardy flowers from Mr. T. S. Ware, of Tottenham, which comprised all the best spring flowers of the season. *Primulas* were conspicuous in the group; *P. rosea* in large pans, a perfect sheet of bright rosy flowers; *P. denticulata* and its white variety very fine; *P. minima* and *P. Clusiana*, two charming alpine species, both having rosy pink flowers; *P. verticillata* and *P. floribunda*, both with yellow flowers, but unfortunately not quite hardy. Saxifrages were well represented in *S. Bursariana*, *S. sancta*, *S. luteo-purpurea*, *S. Boydi* and *S. oppositifolia* in several forms. *Puschkinia seilloides*, *Narcissus Bulbocodium*, *N. reflexus*, *Iberis saxatilis*, *Anemone vernalis* and *Chionodoxa gigantea* were also noteworthy. A silver Flora medal was awarded. Messrs. Paul and Son, Cheshunt, also showed a choice selection of seasonable flowers. *Saxifraga sancta*, *S. luteo-purpurea*, *S. Boydi* and the white form mentioned above, *Megasea Stracheyi*, *Anemone Pulsatilla*, and *Scopolina Hladnichiana*, which was certificated last year, were most striking. *Mezereon Paul's White* is a good form of this favourite shrub, the shoots being entirely hidden with blossoms of ivory whiteness and strongly scented. *Amaryllises* and *Cannas* were also shown by Messrs. Paul, a silver Banksian medal being awarded. A similar award was given to Messrs. Barr and Son for a large exhibit of cut Daffodils and other hardy flowers, but owing to the backwardness of the season no Daffodils appeared in competition for the special prizes. Trumpet-flowered kinds were well represented in Emperor, Empress, Horsfieldi, tortuosus, princeps, Henry Irving, and Golden Spur. Sir Watkin was fine, also Queen Bess and Leeds Minnie Hume among star flowered varieties. *Anemone fulgens*, *A. Pulsatilla*, *A. blanda*, with *Scillas* and *Chionodoxas* completed the group.

Mr. Frank Cant, of Braiswick Nurseries, Colchester, received a silver-gilt Flora medal for an exhibit of cut Tea Roses, the blooms in size and colour being very fine at this early period. Among the best were *Souvenir d'Elise Vardon*, *Niphetos*, *Mme. Hoste*, *Catherine Mermet*, *Mme. de Watteville*, and *May Rivers*, a recent kind of great promise as here shown, having a fine full flower of pure cream-white colour. Mr. Mount, of Canterbury, also showed Tea Roses, receiving a silver Flora medal.

An effective group of flowering and fine foliaged plants, arranged by Messrs. J. Laing and Sons,

included *Clivias*, *Boronias*, *Begonias*, *Anthuriums*, *Azaleas*, and *Saintpaulia ionantha*, with *Crotons*, *Dracaenas*, *Palms*, and *Ferns*. A silver Flora medal was granted. Sir Trevor Lawrence received a similar award for a large group of *Anthuriums*. *A. Scherzerianum* was shown in many forms, of varied colours, and other fine varieties were *A. burfordiense*, with large spathe of deep crimson colour; *sanguineum*, bright red; *Lawrenceanum* and *Archduke Joseph*, distinct magenta-red. From Mr. J. Bennett Poë, Holmwood, Cheshunt, came some good specimens of *Streptosolen Jamesoni*, figured in THE GARDEN, July 5, 1884, the plants comparatively young, but well grown and profusely bloomed, attracting much notice with their brilliant orange-red flowers which were in large clusters all over the plants. *Calla aurata* from the same source was well shown, the leaves large, mottled with white, the flowers pale yellow, but small. A large group of *Dracaenas* from Messrs. J. Peed and Sons, many varieties, well-grown specimens of medium size and good colour, received a silver Banksian medal, and a similar award was made to Messrs. B. S. Williams and Son, of Holloway, for a group of *Clivias* and *Amaryllises*. Messrs. J. Veitch and Sons, Chelsea, showed *Rhododendron Early Gem*, the plants from the open ground and covered with flowers of a magenta-rose colour. It is one of the earliest flowering kinds, but its flowers soon suffer from frost. *Stachyurus præcox* and *Loropetalum chinense*, both abundant in flower, were also shown by Messrs. Veitch. Branches of the first-named had been cut from bushes in the open air. It is an interesting shrub, flowering so early. Its little bell-shaped flowers are of great substance, borne freely in short racemes along the slender branches. *Loropetalum chinense* had evidently been brought into flower in a cool house, otherwise it is hardy and evergreen, having abundant leafage of a deep green colour and bearing curious flowers, which come on slender lateral branches in clusters. Two large baskets of *Violets*, flowering plants profusely bloomed, the varieties *Marie Louise*, *Neapolitan* and *Swanley White*, came from Mr. Slogrove, gardener to Mrs. Crawford, Gatton, Reigate. Mr. Charles Turner, of Slough, sent plants in flower of the *Tree Carnation* Mrs. Hamlet Riley, a pretty variety with pale pink flowers; and a group of finely-cut specimens of *Arum Lily* came from Mr. A. J. Reid, gardener to Mr. F. C. Carr, Farnham Chase, Slough. *Beaumontia grandiflora* was well shown by Mr. Fitt, also *Habrothamnus scabratus*, a large-flowering raceme of *Cordylone australis* and *Glonera jasmiflora*. *Daphne Blagayana* and *Macleania insignis*, a distinct shrubby plant with long, fleshy flowers of a bright coral-red colour, came from Mr. Moore, Botanic Gardens, Glasnevin. Seedling Daffodils were shown by the Rev. G. H. Engleheart, one pretty hybrid, the result of a cross between *Horsfieldi* and *cyclamineus*, being most distinct, though it had gained nothing in size from its larger parent. The flower was about the same size as that of *cyclamineus*, with a pale sulphur-yellow trumpet and pale cream perianth segments which were not reflexed. A seedling from *Golden Spur* crossed with *cernuus* had a fine flower of the same pale colour as *cernuus*, but with a trumpet unusually large and expanded. Other seedlings were shown by Mrs. Lawrenson, Salerno, Killiney, Dublin, two star-flowered kinds having flowers of fine size, with cups of extra bright orange-yellow colour.

#### Fruit Committee.

There was but a limited number of exhibits before this committee. A collection of twenty-four varieties of vegetables was sent by Mr. G. Wythes, Syon House Gardens, Brentford. They were very tastefully set up, one half being forced, the other from outdoors. Considering the severe weather experienced in February this exhibit was most interesting. The best forced dishes were *Asparagus* cut from permanent beds in the open, very good *Seakale*, a nice dish of *Sharpe's Victor* Potato, *Turnip Early Milan*, *Syon House* and

Ne Plus Ultra dwarf Beans, Syon House and Telegraph Cucumbers, Veitch's Maincrop and Cattell's Eclipse Broccoli. The best green vegetables were Ellam's and Veitch's Earliest of All Cabbage, Veitch's Green Curled and Dwarf Late Kale, Victoria Round Spinach (very good), Witloof Chicory, good Lyon and Musselburgh Leeks, Golden Ball Turnip, very fine Mushrooms and Kales (silver Knightian medal). The same exhibitor sent a very fine lot of La Grosse Sucrée Strawberries, large and of very good colour, receiving a cultural award for the same. He also sent a dish of Victoria Round Spinach as gathered from the open ground to show its hardness. This was desired to be sent to Chiswick for trial to test it with Monstrous Viroflay, a French variety. Mr. Goldsmith, The Gardens, Leonardlee, Horsham, sent a new Apple of great merit, a late variety with firm flesh, brisk flavour, and good either for dessert or cooking. The fruits are medium-sized, with a deep crimson colour on sunny side. The committee wished to see it again.

In the absence of Mr. J. Wood the lecture on "Garden Campanulas" was read by the assistant secretary. The flower was dealt with from a garden point of view, upon which the lecturer enlarged considerably, confining his remarks entirely to the perennial species. Many of them were admirably adapted for the rock garden, but he went further, and suggested as the family was such a large and important one that people should make a Campanula garden. They were quite worthy of being made a special feature of. He had himself tried it on a small scale, and found that the family gave a long season of sustained interest and beauty. Another reason why he would make Campanulas a special feature apart from other things was that, deep blues and purples predominating, the family did not always associate well with other flowers, but the Campanula garden near to, and varied by choice shrubs might be a fine feature. He gave an imaginary description of such a garden, choosing a spot sloping down to water upon the margin of which certain kinds would thrive, briefly reviewing a host of species from the little Campanula caespitosa, that would cover the ground with spreading tufts near the margin, up to the tall growing kinds like *C. macrantha* for the distant parts. He gave instructive advice as to culture and propagation, making special mention of some species, as *C. pulla*, whose roots were almost invisible when the plant was dormant, and any division or increase of stock must take place when the plants were in growth.

#### ROYAL GARDENERS' ORPHAN FUND. ANNUAL DINNER.

THE annual dinner of this fund took place on April 5 in the Whitehall Rooms of the Hotel Metropole. There was a large muster of subscribers, and the tables were splendidly decorated with the choicest flowers kindly sent by several nurserymen for the occasion.

The chair was taken by Mr. H. J. Veitch, and there were also present amongst others Sir Trevor Lawrence, Bart., Messrs. Sherwood, J. H. Veitch, J. G. Veitch, W. Manning, Owen Thomas, J. Assbee, J. Laing, R. Barr, H. J. Jones, H. Turner, G. Wythes, J. Hudson, J. Willard, B. Wynne, G. Gordon, F. Moore, C. Penny, and many others.

After the usual loyal toasts had been proposed, the chairman proposed the toast of the evening, "Success to the Royal Gardeners' Orphan Fund," coupling with it the name of Mr. Sherwood. Mr. Veitch in the course of an able and sympathetic speech said he would like the name of the institution changed to the Royal Jubilee Orphan Fund, as it would give it a distinctive mark as being founded in the Jubilee year, and also would not clash with another body. Those present had a good opportunity of hearing how great has been the progress of the fund, the chairman tracing it from its birth upwards, and he felt sure

everyone was glad to see present that evening on this first occasion at the annual dinner Mr. Chas. Penny, who originated the fund, or threw out the suggestion, in the year 1887. An average of nine children have been elected every year since, and he thought it was good cause for congratulation to know that there were now sixty-four children receiving benefit from the fund, and in certain cases at the age of fourteen an allowance was made to give the orphan a start in the world, which, it need not be said, was of inestimable value. Each year the sum of £832 is paid out for the children, and since the fund started £3237 has been distributed. The chairman said the amount invested partly in consols and partly in Canadian stock was £7587, and at the bankers there was a sum of £8395. He said he thought a reserve fund most essential, which should be increased in the same ratio as the increase in the number of children receiving benefit, and a warm tribute was paid to Mr. A. F. Barron, the honorary secretary, for his painstaking work in the past. Mr. Veitch said it was cause for regret that at the last election half of the candidates the fund could not assist, and he impressed on all gardeners the importance of assisting in its maintenance.

Mr. Sherwood said the thanks of all were due to Mr. Veitch for the great part he took in helping forward all charitable works, and said the Royal Gardeners' Orphan Fund must be kept well before the public, so that they could know of its importance; and one suggestion was made—that of establishing a cot at one of the hospitals. He said a little self-denial would effect this.

Mr. Assbee proposed the toast of "Gardeners and Gardening," and at the outset mentioned that this toast was to have been proposed by Mr. Marshall, who, unfortunately, could not attend through indisposition. Mr. Assbee, in an excellent speech, said the love of flowers was deeply rooted, and in referring to gardeners mentioned those who have recently passed away, instancing, as an example of industry, the late Mr. Thomson, of Clovenfords (who had raised Grape-growing for market to such a pitch of perfection), Mr. Thomas Baines and Mr. W. Dean.

The toast of "The Chairman" was received with much enthusiasm, and Mr. Veitch endeavoured to get as large a sum as possible for the fund in which he evinces so much interest. As a result the sum of £817 19s. 6d. was recorded as having been collected, a few of the larger amounts of which are as follows: H. J. Veitch, 50 guineas; Messrs. J. Veitch and Sons, 25 guineas; Messrs. J. H. Veitch and J. G. Veitch, 10 guineas each; Mr. Sherwood, £35 10s.; Messrs. Rothschild, £73 10s.; a Covent Garden Market table, 50 guineas; a Masonic table, £35 9s.; H. J. Jones and personal friends, £55; Messrs. Wills and Segar's collecting list, £40; Sir Julian Goldsmid, £21; Baron Schroeder, £30; Mr. Hill, Tring Park (collected), £20; Mr. W. Robinson, 15 guineas; Sir Trevor Lawrence, £10 10s.; Mr. Haywood, 10 guineas; Mr. A. Moss, 15 guineas; Mr. Reynolds, Gunnersbury Park (collected), £37 11s., besides others. The reading of these amounts was received with applause.

Mr. H. J. Veitch, in replying to the toast of "The Chairman," said great praise was due to Mr. Barron, who had done so much, and also the stewards. He felt very gratified at the splendid list of subscriptions.

Mr. Barron on rising was received with enthusiasm. He said he intended to do his utmost to assist the continued prosperity of the fund as long as health was spared him.

Other speakers were Mr. Gordon, who replied for the press, Mr. Harry Turner, &c.

We may mention that the decoration of the tables was entrusted to Miss Hudson, who did her work well.

**London Pansy and Violet show.**—We desire to draw the special attention of amateur and professional growers of the Pansy and Viola to the exceptional opportunity which this year's exhibition will afford of spreading the taste for their favourite flower through a much wider circle than

has been possible at other shows held by this society hitherto, inasmuch as that of this year is to be held in the same place and at the same time as the great metropolitan show of the National Rose Society, at which it is well known there is always an enormous crowd of spectators and ardent florists from all parts of the kingdom. To all growers we appeal, being anxious to show the public, in the immediate vicinity of the metropolis (where the Pansy and Viola have been somewhat either neglected or unknown), what a charming display can be made by these lovely flowers when properly treated.

#### MARCH IN SOUTH DEVON.

DURING the month of March the rainfall amounted to 3.11 inches, or 0.12 of an inch above the average for the last seventeen years, and 1.94 inches in excess of the rainfall for March, 1894, the number of days on which rain was recorded being fifteen. The rainfall for the first three months of 1895 has reached 7.22 inches against 7.83 inches during the same period of 1894. Of sunshine, 151 hours 20 minutes were registered, this being 2 hours above the average, but 30 hours 50 minutes less than in the corresponding month of 1894. The month's mean temperature of 43.8° is 1.2° above the average. On twelve nights the thermometer on the grass fell below freezing point, the lowest reading being 25°, or 7° of frost, on the 4th. The wind for twenty-five out of the thirty-one days blew from the S. or W., its highest velocity being reached on the 24th, when 789 miles, or an hourly average of 32.9 miles for the twenty-four hours were recorded.

In the garden the end of the first week saw the Crocuses glowing in patches of purple, gold and white on the brown beds. The chaste white Crocus, with its golden anthers, is decidedly the most attractive both to the eye of the flower-lover and to the appetite of the burly humble-bee who tumble clumsily into the white chalice and anon emerge again laboriously, their banded bodies covered with floury gold dust. The Snowdrops naturalised by the waterside in the wood are hardly flowering so thickly as last year, but perhaps, now that their masses of bloom are less dense, they are more beautiful, since the individual flower-bells show to greater advantage among the trailing Ivy net and shimmering blue of their glaucous leaves.

The Arabis was the first flower to recover after the frost relaxed its iron grip, clumps in the rock-work being white with flowers before the leaves showed signs of green. Now that the Wallflowers are all, or almost all killed, the bees have flocked to the Arabis patches in hundreds and the air has been drowsy with their hum, while now and again, in the mid-day sunshine, hibernated tortoise-shell butterflies opened and shut dilapidated pinions on the snowy petals.

On the 15th the first of the Spring Snowflakes (*Leucojum vernum*) unclosed its buds, and soon a goodly colony were nodding their twin, green-margined bells in the breezes. In one garden that I visited the Summer Snowflake (*L. aestivum*) was also in flower, and I found that this particular clump has always bloomed simultaneously with its naturally earlier congener. *Chionodoxa Lucillie* and *C. sardensis* have made a fine show where they were planted thickly enough and were well established, the latter being decidedly the more effective in colour. *C. Lucillie* exhibits considerable variation when allowed to seed, some of the seedlings showing much more vivid colouring than the ordinary type. I have just seen *C. gigantea* and *C. Alleni* in the garden of a noted grower in the neighbourhood, but was not particularly struck by them. Perhaps after they have become established they will show the improved form that is claimed for them. In this garden the first Narcissus to open was *N. obvallaris* (the Tenby Daffodil) on the 18th, a month later than last year. Then came Van Zion on the 21st, Golden Spur on the 23rd, and cernuus on the 28th, followed by maximus and some of the Ajax section that I collected in Spain on the 29th. With the exception of Stella,

which is showing a prodigal supply of buds, none of the Narcissi seemed destined to make a striking display this year. Some clumps evidently will not throw up more than one or two blooms. This is probably owing to the last summer having been so damp and sunless. The buds of the Christmas Rose (*H. altifolius*), after lying frozen and prone since early in January, thawed in the beginning of the month, and soon becoming erect again opened well and afforded a handful of welcome flowers on the 7th. This Christmas Rose has had an unusually protracted flowering season this winter, the first bloom being cut in October, while it will be well into the middle of April before the last are expanded, a period of nearly six months, during two of which, however, animation was suspended. *Hepaticas* of various colours have been and still are bright, but have suffered, in company with the more tender-leaved *Hellebores*, from the loss of their leaves, which sadly detracted from their appearance. *Crocus Imperati*, with its outer coat of buff, is too seldom seen in gardens, but it is worth growing, while the bright blue of the *Scillas*, that outshines even that of the *Chionodoxas*, is indispensable for banks and beds. The Dog's-tooth Violet (*Erythronium dens-canis*), both the common variety with rosy flowers and the white, are at their best during March, and are invaluable for the rock garden, their curiously mottled leaves adding to their quaint beauty. Another charming March-blooming plant for the same position is *Sisyrinchium grandiflorum*, especially its variety *S. g. album*, the satiny white flowers of which, drooping amidst the thin Rush-like foliage, produce an exceedingly graceful effect. *Primula denticulata* is also well worthy of naturalisation, but where unprotected its foliage has suffered from the late severe weather.

The month had nearly waned ere I saw the picture that struck me as being as near perfection in scheme of colour and form as could well be attained—on a mossy bank a colony of Lent Lilies growing out of a blue carpet of *Anemone apennina*. It was one of the harmonies of Nature—pale yellow and pale blue blended by the blue-green leaves of the Narcissi and the lower tones of the foliage of the *Anemones*. S. W. F.

## NOTES OF THE WEEK.

**Scutellaria Mocciniana** was well shown at the Drill Hall on Tuesday, and attracted much notice by reason of its brilliant colour. The flowers, borne in thick clusters at the tips of the erect shoots, are very numerous and strikingly effective in colour, which is bright scarlet.

**Violets from Ireland.**—I send some Violet blooms—Marie Louise, Cooleronan Hybrid and Comte de Brazza. I think the Cooleronan Hybrid is specially good. All will bear comparison with those noted in last issue of THE GARDEN. —P. K. CORE, *Cooleronan, Ireland*.

\* \* A fine lot, the Cooleronan Hybrid a large and exquisite Violet.—Ed.

**Glonera jasminiflora.**—This, one of a large genus of Brazilian shrubs, was shown on Tuesday by Mr. Fitt from Panshanger Gardens, where many tropical flowering shrubs of great beauty are well grown. It is a pretty thing, having thick clusters of flowers at the top of a leafy stem, the flowers much resembling those of the Honey-suckle in shape and arrangement, in colour pure white.

**Primula Forbesi.**—This species, a recent introduction from China, was shown in fine form at the Drill Hall on Tuesday by Sir Trevor Lawrence. The plants, which filled a large pan, had evidently been grown in a warm house, and they were a perfect mass of graceful blossoms. The slender flower-stems vary in length up to 12 inches, with the flowers in whorls, exceedingly numerous, of a pretty clear lilac colour with orange eye. Among all the *Primulas* there is not another kind

so elegant and profuse in bloom as this. It has short-stalked hairy leaves which form a close tuft.

**Odontoglossum Rossi majus.**—I send you a box of cut blooms of *Odontoglossum Rossi majus*, twelve sprays in variety, and should be pleased to hear what you think of them. I received the plants in February, 1893, just as imported.—W. Eastwood, *The Gardens, Height Side, Newchurch, Manchester*.

\* \* A remarkable collection of forms of this popular Orchid. Some of them are in our opinion deserving of varietal names.—Ed.

**Puschkinia scilloides.**—This gem among early spring flowering bulbs deserves to be more popular. It is one of the prettiest things flowering at the present time, and though nearly allied to the *Scillas*, it is quite distinct, with a characteristic beauty of its own. Its flowers, delicate in colour, bluish white, with a deep blue line down the centre of the petals, are very numerous and borne in a compact head on a stem nearly 6 inches in length.

**Hippeastrum splendens.**—This pretty free-flowering species was noticeable in Mr. Sander's group at the Drill Hall on Tuesday, and it would no doubt be a popular plant if it were more amenable to cultivation. Bulbs when fresh imported flower abundantly, but under cultivation they soon deteriorate. It is a free-flowering species, most of the bulbs shown having three flowering spikes. The flowers are large, graceful in form, and of a light red colour.

**Tulipa Kaufmanniana.**—This, one of the earliest Tulips already in flower, is a pretty species, and so robust in habit that the storms scarcely mar its beauty. Its flower is very large, borne on a stout, erect stalk about 6 inches in height; the petals externally greenish yellow, with a feathered band of red down the centre, and internally pale cream-yellow, deepening into sulphur at the base. The flower both in its fine proportions and delicate colour is most distinct, and the species is a welcome acquisition, whose merits and beauty should be widely known.

**Daffodils.**—A clump of the common double Daffodil here which usually produces a dozen flowers or more shows but one solitary bloom this season, and this at an unusually late date, viz., April 4. As a contrast, on referring to my diary, I find that the same clump came into bloom on March 4 in the year 1884—exactly a month earlier. I daresay this late and impoverished blooming is the result of the uncommonly severe frost last February, which killed outright some well-established plants of *Geranium pratense* var. *album* and *Cyclamen coum* var. *venum* in the same border. —W. M., *Weyford*.

**Salvia Heeri.**—At Broad Oaks, Byfleet, this is grown exceedingly well, and the bright scarlet flowers are borne in great profusion. The variety here is considered a good one; the flowers certainly seem larger and deeper in colour than those of the ordinary type. This may, of course, be owing to the locality or soil being specially suitable. The practice is to strike young plants each year. This is an easy matter, as *Salvias* are not at all difficult to root. They are then planted out in the open garden, and remain there until September, when they are placed into pots in ordinary potting mould. *Salvia Heeri* is naturally branching, but if there be a danger of the plants growing tall, take out the tops to make them bushy. When coming into bloom a little generous treatment in the way of stimulants is found beneficial. —H. S.

**Clematis indivisa lobata.**—I never saw this plant in greater beauty than at The Oaks, Byfleet. One specimen covers the larger portion of the roof of a good sized conservatory, and although the bloom is a little past its best, one can form an idea of its value for the purpose. It is literally covered with masses of white blossoms, which last a considerable time in a cut state. Its cultural requirements are simple. Plant it in a compost of loam, peat and sand, give it a fair root-run, and do not stint the water supply. It

needs little pruning unless it be to keep it within a limited space, for when once established it grows with much freedom. Loose training adds to its beauty, as the branches of bloom hang gracefully at some distance from the glass roof.—H. S.

**Strawberry Royal Sovereign.**—It would be difficult to give too much praise to this as a good forcing variety. A batch brought on under precisely the same conditions as were Laxton's Noble, Vicomtesse Ilricart de Thury, John Ruskin, and Competitor ripened their fruit a week before the Vicomtesse and ten days before Noble, while Ruskin and Competitor are still further in the rear. Royal Sovereign throws its flower-trusses, which are sturdy, well above the foliage in marked distinction to some of the other varieties, especially John Ruskin, which seems a weak grower. Besides being the earliest to ripen fruit, Royal Sovereign is easily bearing the palm in weight of crop, the plants averaging about half a pound's weight of fruit on each. Exceptional berries weigh 1½ ozs. and are particularly taking in appearance, being of a brilliant shining red. For earliness and heavy cropping this Strawberry appears to be *facile princeps*.—S. W. F.

**Carpenteria dying.**—Mr. Ewbank is puzzled about the death of his *Carpenteria*. Perhaps I can help him to explain it. I had the plant first more than a dozen years ago. Since that I have had several plants which have done well, grown into good bushes, flowered well, and one after another they have died. The explanation is that the plant is not a long-lived one, and the same explanation applies to many plants which are supposed to be killed by the frost. Plants die from many other causes than cold, though the cold is generally made to bear the blame of all. As to protection for shrubs, I am sure that the two necessities are to keep in warmth at the roots by mulchings of all sorts and to protect against high winds by screens of almost any description. It is much too early yet to say what is saved and what is lost. I would strongly advise everyone to be very slow about cutting down or pulling up anything yet. Of course, there must be many losses, but there will be some very unexpected gains, like Mr. Ewbank's *Poinciana*. —HENRY N. ELLACOMBE, *Bitton Vicarage, Bristol*.

**William Thomson Memorial Fund.**—We are asked to state that a fund is being raised to commemorate the services to horticulture of the late William Thomson, of Clovenfords, the sum collected to be given to the Gardeners' Royal Benevolent Institution and the Royal Gardeners' Orphan Fund. Should a sufficient sum be obtained, it is proposed to keep a pensioner in perpetuity on the funds of each institution. To enable this to be done a sum of £1250 is necessary; a perpetual pension to the G.R.B.I. requiring £750, and that to the R.G.O.F. £500, the power of electing these pensioners being in the hands of the Royal Caledonian Horticultural Society, Edinburgh. Should a sufficient sum not be obtained for this purpose, it is proposed to divide the amount raised between the two institutions proportionately. It is hoped that a very liberal response will be made not only because of the esteem in which Mr. Thomson was held, but also on account of the object to which the fund is to be devoted. Executive committee for England: H. J. Veitch, chairman; A. F. Barron, Chiswick; Bruce Findlay, Manchester; J. George, Putney; P. E. Kay, Finchley; G. Monro, Covent Garden; G. Norman, Hatfield; F. Sander, St. Albans; J. Smith, Mentmore; R. Tait, Manchester; O. Thomas, Frogmore; H. Williams, Holloway; G. Wythes, Syon House; J. G. Veitch, honorary secretary, R. E. Nursery, 544, King's Road, Chelsea, S.W., to any of whom subscriptions may be sent. It is proposed to close the fund on May 1.

**Names of plants.**—S. N. T.—1, *Lachenalia tricolor*; 2, *Francisca calycina*; 3, *Abutilon vexillarium*; 4, *Chorozeema varium*.—H. A.—1, *Jasminum gracillimum*; 2, cannot undertake to name Roses or any florists' flowers.

No. 1222. SATURDAY, April 20, 1895. Vol. XLVII.

"This is an Art  
Which does mend Nature: change it rather; but  
THE ART ITSELF IS NATURE."—*Shakespeare.*

## CHRYSANTHEMUMS.

### NOTES ON RECENTLY INTRODUCED VARIETIES.

To be successful in the cultivation of the popular autumn flower not the least important matter is the study of the ways and peculiarities of each individual kind. Hardly two sorts are alike in constitution, shape of flower and time of blooming. Others again are specially valuable for one mode of culture only, that is, for the growth of gigantic exhibition flowers. The system is, of course, one which has tended more than any other to make the Chrysanthemum what we find it to-day, but still it is after all only one of the many uses for which the plant is so admirably adapted. One would imagine that with the hundreds of new kinds raised each year the wants of all classes of admirers of the flower would be well supplied; but are they? There is still a dull, dingy look among the pink and red-coloured early varieties. Many of the most handsome blooms are obtained on plants which reach an abnormal height, and how prized would be more change, particularly brighter colours, among sorts that naturally bloom late; something that would light up the period of Christmas and after. Late whites are fairly plentiful, but yellows are still scarce; and if the fashion is to be a guide, it seems late Chrysanthemums will be in demand.

**A. H. FEWKES.**—Of the richest yellow, with long, broad, heavy florets. The shape is handsome, while the habit of the plant is very sturdy. This variety came late last season from America, but it certainly promises to be a sort we shall esteem when better known. It is likely to develop fine exhibition blooms as well as prove valuable for the supply of flowers in quantity. For the former purpose choose flower buds which show about the middle of August and treat the plant generously in the way of a large pot and stimulants.

**CECIL WRAY.**—When this variety was successful in obtaining the first-class certificate of the National Chrysanthemum Society it was seen in splendid form, large, spreading, and in every way a fine type of the Japanese. The colour is a bright, clear yellow, florets flat and of great length. Its habit of growth is dwarf and sturdy, the foliage handsome and retained on the stem to the last. I expected to find this variety much in evidence at exhibitions last season, but, curiously, it was among the least shown. Whether this fact was through over-propagation or caused by the uncommonly wet summer it would be hard to say, but I feel sure we shall again see it figuring conspicuously among the choicest exhibition kinds. Its habit, too, as well as the formation of the flowers should make it popular for cutting. Treat this variety well, give it ample pot room, and for large blooms select the early buds.

**COL. CHASE.**—This sort was obtained from the same seed bed as the last named, and when I first saw it I was particularly struck with the chaste and charming colour—a blush cerise shade. The drooping form, too, was very taking. But after cultivating it a season, I have placed it among the second-rate kinds. It grows too tall. The foliage is spare and comparatively unattractive, and its blooms will not come large enough for exhibition. For other purposes there are better and more striking sorts of similar colour. This sort does not require a large pot, and for show one must select early flower-buds.

**COMMANDANT BLUSSET.**—Here we have a splendid kind in every respect. The colour is rich carmine-red. The blooms attain a large size; the florets are long, narrow, and handsomely drooping. It is dwarf in growth, with fine foliage of a dark green colour; somewhat early to bloom. It is a magnificent kind for exhibition, and not less valuable for grouping and for the supply of a quantity of blooms as a bush plant. For exhibition select crown buds, which appear early, give it a pot of 10 inches diameter, and treat it well in the way of stimulating manures, which may, however, be withheld when the blooms show colour. Like most of the highly coloured sorts, it is apt to burn or damp.

**DESDEMONA.**—This is an exceedingly graceful and handsome flower, large, full, with very long, narrow, drooping florets. The colour is a pale rosy pink. Its only fault is a somewhat tall growth, but where the cultivator does not mind this and requires a fine bloom for the show-board, the variety should be added. The early crown buds may be selected. One might try cutting down this variety during June.

**DEUIL DE JULES FERRY.**—I am certain we have not seen this variety at its best. When first sent from France a couple of seasons back it appeared remarkably promising, but owing to a late start last year as well as a sunless season, it was not seen in anything like good form. Its unique shade of violet-rose colour was, however, still there; also the slightly drooping formation and perfectly double flowers. The florets are wide and long. It is of medium height with ample foliage. Being somewhat late, early buds should be secured for exhibition blooms, and as a naturally late-blooming kind, it will prove valuable for cut flowers on account of its striking colour and lasting qualities. Give the variety ample pot room.

**DUCHESS OF WELLINGTON.**—This deep golden yellow flower was seen in good form last year on plants which were rooted late, and consequently had a short season. I expect, therefore, with longer time to develop it will be still finer this year. It is essentially a show flower. The florets are fairly broad and go off to pointed tips. The form is loosely incurving and the bloom forms a full rich mass. The growth of the plant is excellent and the foliage handsome. Secure early buds. Do not employ very large pots, but the plant will respond to stimulating manures.

**DUCHESS OF YORK.**—This novelty was well and consistently exhibited from the middle of October to the end of November, a pretty good test of its merits. It is of medium height and has very fine foliage. Its cultural requirements are simple. Allow ample pot room and, like all the yellow sorts, abundant supplies of water. The colour is particularly pleasing; not deep, but clear. Its formation is of the informal drooping type, graceful and imposing. Large enough to suit the tastes of the exhibitor, it is equally useful for the supply of a large number of flowers on a plant, and is, perhaps, the best new variety seen last autumn.

**GURLANDE.**—This sort is not of the gigantic order, but its deep, full reflexed blooms are remarkable for substance. The colour is white, tinted salmon. It is a good grower, of medium height, and a sort that will be much esteemed when better known.

**HAIRY WONDER.**—Varieties of the hairy-petalled class were never very popular. Mrs. Alpheus Hardy is very beautiful, but most difficult of culture. If, however, these curious types are to be in favour, there is no sort so likely to bring popularity as the one at the head of this note. When at its best the colour is a brown-buff shade, at once distinct and pleasing. The flowers are large, massive and well formed. Its florets point inwards just enough to exhibit the remarkable number of light, hairy spines, which give the blooms a downy appearance. The plant is vigorous, therefore easily grown. Do not select early buds; those that appear in early September will produce the prettier blooms. I should like to see a bush plant of this variety very slightly disbudded. It would certainly form a choice and

taking object. It is well to use 9-inch pots, but the variety must not be overdone with manure.

**LA MEISE** is a well-formed, pure white flower of large size. The habit is somewhat tall. Exhibitors will, however, find it a very useful sort to add to the lists.

**LE RHONE.**—This light soft yellow is a capital sort on account of the sturdiness of its growth. It is good for exhibition, and perhaps more valuable still as an easily cultivated, well-shaped flower for any other purpose. Early-formed buds do not develop well.

**MME. CARNOT.**—Pure white varieties have a most handsome addition in this new kind. The flowers may be obtained of huge size by growing the plant on the orthodox exhibition rules, viz., concentrating all its energy to three blooms. In this case the long narrow florets interlace and build up a graceful mass. Its habit is excellent, and in the matter of foliage it is one of the most striking kinds in existence; good in any style of growth and certain to become popular. Use large pots for this variety, but do not overfeed with manure. White Chrysanthemums are easily ruined by stimulants. Select rather late-formed buds. The blooms from early buds have a thin, spidery appearance.

**MISS MAGGIE BLENKIRON.**—When well grown this is an exceptionally handsome exhibition flower. It is slightly incurved in form and the colour is bronzy yellow; the florets are thick and massive and the growth of the plant remarkably sturdy. Early buds must be chosen. This is not a useful sort for the supply of a quantity of blooms on a plant. The variety requires a long season to do it well; therefore start with a good specimen.

**M. CH. MOLIN.**—This is one of the most striking sorts seen last year. The combination of yellow and bronze is indescribably rich and striking. Its flowers are of reflexed shape, thus showing the upper surface of the florets, large, full, and massive; habit dwarf and the plant of easy culture. Early buds may be had for large blooms, and its qualities are likely to make it valuable as a variety for the supply of flowers in quantity.

**M. GRUYER** is an excellent sort; colour white with a rosy tinge. The blooms grow large, full, and massive. Its form is of the slightly drooping character and the florets are notable for substance. This should prove alike valuable for exhibition and other purposes. The habit of growth is excellent. It will do well with ample pot room and requires generous treatment in the way of fertilisers.

**M. PANKOUCKE.**—This variety is to my thinking the finest yellow Chrysanthemum we have had since the introduction of Sunflower. Its only defect is just a slight want in the brightness of its colour. The blossoms are large and of a true Japanese character—that is, fantastic in arrangement of the florets. The flower stem is stiff, thus holding the bloom firmly, and the growth all that one can desire. For exhibition select early buds and give it ample root space. An amateur's sort, because easily grown and handsome withal.

**MRS. E. G. HILL.**—American introductions are usually late-blooming, but here is a sort at its best in October. The colour is a pleasing shade of lavender, tinted white. It is of most easy culture and not too tall. Blooms grow to the standard of size required by exhibitors, and it is among the most valuable kinds when allowed to develop all its flower-buds. Give this sort a good-sized pot.

**MRS. W. H. LEES.**—Colour white, slightly tinted pink. Late blooms are distinctly pink shaded. It is of immense size and exceedingly graceful in form, having long drooping florets. As a show bloom it is very fine, but its rather tall habit detracts from its value as a variety for more general culture. Early flower-buds should be selected and the ample foliage points to the fact that it requires a good-sized pot and abundance of moisture at the roots.

**MRS. E. S. TRAFFORD.**—A bronzy rose sport from the amateur's typical flower, Wm. Tricker, which cannot be other than welcome. It is among

the easiest to cultivate, has a dwarf habit and good from any buds. Being somewhat early, it is well, however, not to secure those that form before August for the November period. My practice with the type is to restrain the natural vigour by using small pots, that is, not larger than a 9-inch size.

**NIVEUM.**—Any mention of recent Chrysanthemums that did not include this variety would be incomplete. It is for all uses the finest pure white sort we have. Every good quality is possessed by this flower—purity of colour, nice form, substance of petal, erect flower-stem, good habit, and easy to grow. This sort should be cultivated by all. It is safe to say that in a year or two we shall not only see it on every exhibition stand, but the flower markets will demand it in abundance.

**RICHARD DEAN.**—This sort has not yet been seen at its best. I am certain it will become esteemed. It is of large size and very effective in colour—crimson and gold. It has a dwarf, sturdy growth. Employ large pots, select early buds, and give it generous treatment in the way of fertilisers.

**ROSE WYNNE.**—Many persons object to the incurving form of the Japanese. This is one of the type, but most informal in arrangement of the petals, which are long and broad. The bloom builds up to a large size and is useful as an exhibition variety. Colour white, just a little tinted with pink. It is a good grower, of medium height.

**SIR EDWIN T. SMITH.**—This variety possesses a tiding shade of deep rich yellow and the reflexed shaped flowers are massive. Its fault is a weak flower-stem, which makes it unsuited for other purposes besides exhibition blooms. The habit is excellent. Choose buds of early formation.

**SOUVENIR DE PETITE AMIE.**—The growth of this variety is of a very dwarf nature and the foliage handsome. Its flowers are large and of snowy whiteness, of recurved form, thus exhibiting the glossy upper surface. For show, bush plants, grouping, or the supply of a quantity of blooms it will prove an acquisition. Use large pots for this sort, but do not give it much manure in any form. I prefer bones in the soil for white varieties, refraining from the use of fertilisers afterwards.

**WILFRED MARSHALL.**—As a bright yellow show bloom this should be valuable. It is incurved in form, very large and striking. It is easily grown, with a nice dwarf habit of growth and large leaves. Select early buds, for, like most of the incurved Japanese type, it takes a considerable time to develop the blooms.

All the foregoing belong to the Japanese section. Many other sorts seen for the first time last autumn require a year's trial before one can write anything definitely about them. We know by experience that the fact of a variety being awarded a first-class certificate does not of itself prove that such variety is worthy of general cultivation. The blooms only are adjudicated upon. These, perhaps, have been obtained from a weakly plant or one of ungainly growth. They may, again, be produced from skilfully manipulated stems or by mere chance, which may never recur. For example, the magnificent bloom seen of Mrs. C. E. Shea was, I believe, the only one produced. Philadelphia was grown in a climate thousands of miles away. Of Pallanza it is too early to speak, and so on through a list of most promising kinds.

H. S.  
Working.

#### STANDARD OF CHRYSANTHEMUM BLOOMS.

MR. TALLACK and Mr. Douglas do not apparently agree as to the standard that should be adopted in judging Chrysanthemum blooms. Mr. Douglas is alluding to blooms that have been grown mainly to bring out all the points of which they are capable, each variety in its own way. The method

by which this end is attained is to limit the number of blooms upon a plant. Mr. Tallack is evidently alluding chiefly to plants for decoration. This system of culture is better known as the "bush" method of growing the plants. If I am right in my supposition, the two methods afford no room whatever for argument; both are correct in their own particular sphere. Mr. Douglas, I am sure, admires the class of plant which Mr. Tallack favours. The standard "set up by the best judges" of cut blooms embraces an exceedingly wide sphere, so much so, that it would be extremely difficult for even Mr. Tallack to add another. When cut blooms are being judged it matters not whether the plants upon which they grew were 2 feet or 15 feet high. When plants of Chrysanthemums, in groups by themselves, or amongst fine-foliaged plants, are being judged, then the standards alter at once. There "lumpiness," as Mr. Tallack points out, would not carry the award with "the best judges."

When dealing with cut blooms only the considerations kept in view are numerous, embracing such points as size, depth, solidity, breadth of floret, symmetry, freshness, colour, coarseness of floret, contour, well-filled centres, consistency of form with the variety, and lastly difficulty of cultivation. This list is somewhat lengthy, and if Mr. Tallack can say that much relating to the flower is left out, I shall be much surprised. Mr. Tallack appears to find fault with the great depth possessed by some varieties, and appears to think that because of this they lose elegance and grace. I will name but three varieties, viz., Vivand Morel, its sport, Charles Davis, and the newer Duchess of York. Could anything be more beautiful than these? Not only do they possess immense depth of petal, but elegance as well.

Mr. Tallack appears to me to rely too much upon catalogue descriptions. I have long since found these much too misleading generally. He talks of a variety there quoted as being 9 inches in depth. I have never seen a Chrysanthemum bloom of the dimensions quoted. Mr. Tallack names some plants possessing blooms that "had been forced into great depth at the cost of loss of character and beauty." This statement is hardly consistent, as it is not possible to make a naturally thin bloom into a deep one. E. MOLYNEUX.

#### OUTDOOR BLOOMING CHRYSANTHEMUMS.

WITH such an improvement in varieties, outdoor flowering Chrysanthemums are taking a much higher place where blooms for cutting during September, October, and the early part of November are in request. This type of Chrysanthemum consists of varieties with reflexed florets, the bulk of them being small-flowered Japanese kinds. Where the glass accumulation is limited, these early flowering varieties come as a boon to those who have to provide blooms in quantity. There is likewise a clear distinction in the colour of the blooms as grown out of doors compared with those of the same variety developed under glass.

Although Chrysanthemums are regarded as being perfectly hardy plants, they are not so when put to the test of a winter like the past. Some hundreds of plants have succumbed this year to the intense frost. Where the precaution was taken to place a layer of ashes, manure, or leaf mould about the stems of the plants before sharp weather set in, the roots have fairly well withstood the rigours of the winter. Where any doubt exists in the mind of the cultivator that the roots will not remain uninjured in the ground, it is such the best way to lift them after flowering and store them in a cold frame where they can be protected from frost.

About the middle of March, if an increased number of plants should be required, the roots should be divided and planted in boxes in sandy soil. Every single shoot with a root attached will quickly develop into a stocky little plant if the frame be kept close for a time. The more robust the plants are the greater is the prospect of a good crop of bloom. Plants growing at the foot

of south walls will need renovation after such a severe winter. No plants are so good for making up gaps as the old roots or stools that flowered in pots last season. One of the main reasons for this is that so many more growths spring direct from the base than is the case with spring-struck plants of the current year. To furnish a wall thoroughly a good foundation ought to be laid, the growth starting direct from the base. Half-a-dozen shoots from one plant a yard from its neighbour should make a nice display with the additional growths that are the result of various natural breaks. A fairly rich compost is an advantage. A mulching of half-decayed horse manure will do much to conserve moisture in the soil should the months of May and June be hot and dry. Those who have not adopted this form of cultivating Chrysanthemums and beautifying what would otherwise be bare spots, should lose no time in making a start. Where possible to obtain roots of single-flowered varieties I would advise that they be planted, as no type is better suited to this form of outdoor growth than this. Not only do the flowers possess all the points that go to make a graceful combination of colour and form, but they last a long time fresh. E. M.

#### ORCHIDS.

##### CATLEYA GUTTATA AND VARIETIES.

CATLEYA GUTTATA is a very free-growing species, attaining a height of from 2 feet to about 30 inches, the elongated cylindrical bulb being furnished with a pair of coriaceous leaves, each about 8 inches or 9 inches long. This species usually produces its flowers during the winter and spring months, these being borne from five to eight upon a short raceme. The individual blooms measure nearly 4 inches in diameter, the sepals and petals being similar. The flowers in the typical form, which, however, is not often met with at the present time, are of a greenish yellow, spotted with crimson. The side lobes are white on the outer surface, and contrast well with the rich purple of the middle lobe. This fine species was introduced by the Royal Horticultural Society about seventy years ago. It requires treatment similar to that usually given the majority of Cattleyas. One of the most beautiful varieties is

CATLEYA GUTTATA LEOPOLDI, which has bronzy green sepals and petals, with deep purplish spots; the lip is of a bright amethyst-purple, the whole bloom individually smaller than in the typical form. This, however, is made up by the greater number of flowers borne upon the spike, for it often carries a dozen or more upon one peduncle. This variety was introduced about forty-five years ago by a Belgium nurseryman from Santa Caterina. The collector stated that this distinct kind grows naturally more inland, and nowhere near the coast.

C. G. LILACINA.—This is perfectly distinct from the type, especially in the colour; the sepals and petals are pale rose spotted with deep purple, whilst the lip is of a bright magenta crimson. This charming addition first made its appearance in the collection of Sir Trevor Lawrence, Bart., about fifteen or sixteen years ago. It usually flowers somewhat later than other kinds. Another very beautiful and distinct variety is

C. G. PRINZI. This is a very handsome flower; the sepals and petals creamy white, flushed with bright rose and spotted with crimson, whilst the lip is of a deep and bright purple. I recently noticed a fine form of this shown by Mr. Hill, gardener to Lord Rothschild.

These are no doubt the most distinct, but there are others which have received varietal names. WM. HUGH GOWER.

**Dendrobiums from Cheltenham.**—From Mr. J. Cypher, the Exotic Nurseries, Cheltenham,



comes a box of flowers containing a very choice assortment of these beautiful and useful Orchids. Amongst the most noteworthy were the fine *D. nobile* Cooksoni in grand form, *D. nobile* Statterianum, very beautifully coloured; *D. Wardianum* giganteum, flowers of enormous size, measuring upwards of 5 inches across the petals, with bright crimson purplish tips to each segment; also a very beautiful variety of *D. Wardianum* album of the purest white, excepting the pale yellow blotch on the lip. A magnificent form of *D. Leechianum* was also sent, the blooms being of large size and very richly coloured in the throat.—W.

**Cypripedium Harrisianum, nigrum.**—A very fine form of this variety is now in bloom at the Roupell Park Nurseries, Tulse Hill, the flower being identical with that of the typical form, but of a very deep shade of colour. *C. Harrisianum* is remarkable as being the first hybrid raised in our gardens. It is the result of crossing *C. villosum* and *C. barbatum*, and although it was the first one raised, it still takes a foremost place in nearly every collection.—G.

**Cypripedium caudatum** (Wm. Cooper).—This species was introduced about fifty years ago from Peru, where it grows at over 5000 feet elevation. It should be placed with other warm house kinds and given similar treatment. It is a very interesting plant and always attracts attention whenever seen in flower.—W. H. G.

**Angræcum fastuosum.**—This is a very remarkable and distinct little species and one that is seldom seen in bloom. It was introduced about sixteen years ago by Messrs. Sander and Co., of St. Albans, and was also recently exhibited at the Drill Hall by Messrs. Veitch and Sons, of Chelsea. It is a plant of very dwarf growth, producing stems from 1 inch to 2 inches in height. The flowers push up from amongst the leaves in profusion and individually measure about 1½ inches in diameter. These are of the purest white and the long white spur measures 3 inches. It is one of the most distinct species in this genus.—W.

**Masdevallia leontoglossa.**—This very curious and beautiful species recently flowered well in the collection of Sir Trevor Lawrence, Bart. It was introduced by Messrs. Linden, of Brussels, upwards of thirty years ago, but it is still a scarce plant. The flowers are produced on very short peduncles. The perianth tube is pale yellow, spotted above in regular rows and also beneath with deep purple, the sepals having short broad tails about 1 inch in length. These are of a yellowish green ground colour, spotted with very dark purple warts. The small lip is covered with papillæ and is of a rich purple colour.—W. H. G.

**Trichopilia suavis superba.**—A well-flowered specimen of this old favourite was exhibited at the last meeting of the Royal Horticultural Society by Messrs. Lewis and Co., of Southgate, the individual blooms being of fine size and nicely spotted with bright rose. It is now upwards of fifty years since the typical form first made its appearance, and it certainly deserves attention from all lovers of Orchids. It is especially adapted for amateurs with small collections, as it is a plant of very easy culture, free flowering, and possessing a very pleasing powerful fragrance. *Trichopilia suavis* is a native of Costa Rica, where it grows at an altitude of from 6000 feet to 8000 feet. It was first discovered about the year 1848. *Trichopilia* like a good season of rest, and should be potted in fibrous peat and Sphagnum Moss with good drainage, care being taken when repotting that the bulbs are not inserted in the compost, but placed upon an elevated mound above the rim of the pot. The variety here referred to is of exceptional merit, the flowers much larger than in the typical form and very brightly coloured.—G.

**Eulophiella Elizabethæ.**—This remarkable Orchid, which is still a novelty, was represented in the collections of Sir Trevor Lawrence, Bart., and Messrs. Sander and Co., of St. Albans, at the recent meeting of the Royal Horticultural So-

ciety. This plant is sure to become a great favourite amongst Orchid lovers who have sufficient heat at command to grow it, for heat and moisture are its natural requirements. The flowers, pure white on the inner side, deeply coloured on the outer surface, are borne on pedicels and stems of deep purple, thus forming a curious contrast.—W. H. G.

**Lælia Latona.**—This charming hybrid was shown at the Drill Hall on the 9th inst. by Messrs. Veitch and Sons, of Chelsea. It is stated to be a cross between *L. purpurata* and *L. cinnabarina* and produces flowers of an orange-yellow colour, the sepals and petals somewhat narrow and of a uniform shade. The lip is long, undulated at the margin and of a similar ground colour, shaded on the disc, and veined with bright carmine. It is certainly a fine acquisition to this section.—H.

**Dendrobium Rolfeæ roseum.**—Under this name was shown at the Royal Horticultural Society's last meeting a very pretty *Dendrobium* of the noble section, and which was stated to be a natural hybrid. Whether this is a natural hybrid or not, *Dendrobium nobile* predominates, and one would be inclined to believe that this is another of the numerous sports of this variable species. Upon a recent visit to Messrs. Laing and Sons' nurseries at Forest Hill I was shown a very distinct form of *Dendrobium nobile*, which is evidently the same variety as that shown at the Drill Hall.—G.

**Cymbidium Lowianum viride.**—A nice plant of this distinct variety was staged by Mr. Smee, of Carshalton, under this name, and although it is now usually applied to this yellow form of *Lowianum*, the proper name should be *C. Lowianum Mandaianum*, it having been first exhibited by Messrs. Piteher and Manda and described under that name in the horticultural press. The plant referred to carried a nice spike of eighteen blooms, which were of fine size, with clear yellow sepals and petals, the lip, as in the typical form, white, but with a very bright yellow blotch in place of the rich maroon colour. In habit of growth and all other particulars it is identical with the ordinary *C. Lowianum* and makes a very charming companion to that species.—W.

#### ORCHIDS ON BLOCKS.

Of the smaller growing and weakly-rooted species of Orchids there are many that—other conditions being suitable—are better on blocks than in any description of compost. A few also that are usually found difficult to establish may be induced to root upon a piece of teak or other lasting wood, thus giving the plants a start that cannot easily be obtained in any other way. Some may be inclined to argue that as Orchids in the majority of instances grow naturally upon the branches or trunks of trees, therefore blocking is the most suitable, because the most natural, mode of treatment for them. All practical growers, however, will be quick to note the fallacy of this reasoning. Even if we could produce an atmosphere similar to that of the natural habitat of the plants—which, unfortunately, we cannot—the task of watering would be herculean if all the epiphytial section were grown in this way. It is also well known that many Orchids under cultivation produce finer growths and larger flower-spikes than when growing naturally, owing to the moisture-holding and manurial properties of the compost provided. Opinions vary considerably as to the merits of various kinds of wood for Orchid blocks, some choosing teak, others Birch, Oak, Apple, or charred deal. Although to a certain extent a matter of fancy, the teak is probably the best, as it is so long-lasting. Oak newly sawn is certainly unsuitable, although if cut and properly seasoned it serves the purpose well. Cork is freely used for Orchids, and though denounced in some quarters as harbouring insects and fungus, this material will, I believe, be even more used in future than it is at present. I have, personally, had good results by using this material

for many dwarf-growing *Oncidiums*, particularly *O. Papilio*, giving a little Sphagnum Moss and keeping this growing about the plants in summer. *Lælia acuminata*, too, I have recently seen in first-rate order under similar conditions. The great drawback to the general use of blocks is the difficulty that is experienced in transferring the plants to a new piece when the old one decays. It is impossible to do so without checking the plants more or less seriously, so that the advantage of using blocks that last well is obvious. In all cases where practicable it is best to insert the block into a basket or pot as soon as it shows signs of decay, picking out the decayed portions of wood when subsequently repotting; or if a small flat block, it may be cut away all round where there are no roots and the remainder nailed entire to a larger piece, removing the old wood piecemeal as the roots take to the new and securing the plants in position by degrees. *D. Devonianum* when newly imported is an awkward plant to pot, as the long, pendulous stems are not easily supported without burying the eyes at the base, which would be fatal to the plant's well-being. This and similar Orchids may be easily and readily established if wired firmly to suitably sized blocks, the latter being inserted in pots, filling up these with potsherds, charcoal and a little Sphagnum. This will conduce to free root-formation, and the following season the plants may be potted in the ordinary way, or if the roots have taken firm hold of the block, place this in the pot again and treat as described above. The practice which obtains in some gardens of wiring lumps of peat to huge blocks and placing thereon such plants as *Cologyne cristata* cannot be too strongly condemned. The continual watering swells out the peat, the plants are gradually loosened from the blocks, and are always untidy. Wherever wood is used the base of the pseudobulbs or rhizomes must be brought into direct contact with the block, and so firmly fixed that it cannot be moved either way. A little Sphagnum under will do no harm; in fact, it is often necessary, but beyond this nothing is needed, and any plants requiring peat are much better accommodated in other receptacles. In fixing the plants a few thin strips of cork will be found of great assistance, as the wire used must be fine enough to be very pliable, and if tightly drawn, as it must be, it would cut through the rhizomes or pseudobulbs without this protection. Copper wire and tacks or nails should always be used, as in the moist heat of an Orchid house iron soon rusts, galvanised iron being also unsuitable. H. R.

**Odontoglossum læve superbum.**—This fragrant and small-flowered *Odontoglossum* is not much in favour with Orchid growers, its more gorgeous relations being more cared for. A very nice plant carrying a fine spike of many blooms is now flowering with Messrs. Lewis and Co., of Southgate. The sepals and petals are yellow barred and tipped with cinnamon-brown, whilst the lip is of a deep rosy lilac. This plant will often carry three dozen or more flowers upon a spike. I am in receipt of a bloom from C. Kingston under the name of *O. Reichenheimianum*, but this I believe to be synonymous with the above.—W. G.

**Lælia flava** and var. **aurantiaca.**—A spike of this pretty little *Lælia* comes from Chas. Box for a name, who asks for further information respecting its introduction, &c. The flowers to hand are of the typical form (*Lælia flava*), and a nice spike it is with eight fine blooms; these are of a uniform orange-yellow colour. It is a native of Brazil, where it grows at a considerable elevation, and consequently requires cool treatment under cultivation. It is recorded as having first flowered in this country in 1839. The variety *aurantiaca* I noticed at the last show of the Royal Horticultural Society, where it was exhibited by Mr. Hill, gardener to Lord Rothschild, of Tring Park. In this the flowers were similar to those of the type, of good size and of quite a reddish hue.—W. H. G.

## FERNS.

### HARDY FERNS.

In most gardens, large and small, there are places which cannot well be embellished by using flowering plants. Where most things fail, the more vigorous-habited, hardy Ferns will find a happy home. In dark corners or in the shade of trees they will thrive admirably, and once fairly established they will give no further trouble. It is a curious fact that many who do not grudge the labour and expense necessary for the culture of Ferns that demand the shelter of glass make little or no attempt to beautify their garden with our native kinds, which are not inferior to their exotic relatives in beauty of form and nobility of growth. I have a couple of specimens of the common male Fern which some ten years back were small plants with half-a-dozen fronds. At the present time they carry in the season a hundred or more fronds, which attain a height of 4 feet or more. Few exotic Ferns could produce a finer effect, and the majority of them cannot even with the best culture equal this common British species when seen in its best condition. Any fairly good garden soil will suit them, but, of course, they will attain finer proportions in a good compost of loam and leaf-mould. It is quite a mistake to suppose that rockwork or an elevated position of any kind is necessary for the well-being of hardy Ferns generally. Some kinds of lowly growth, such as *Asplenium viride*, *Ceterach officinarum*, and the Holly and Parsley Ferns, must have good drainage, but the robust habited varieties do not need this accommodation, and in a general way do best when the roots are not raised much above the ordinary ground level. Planting them on rockwork, rootwork, or mounds deprives them of the moisture they so much need in the growing season. One of the very finest Ferns is the Royal Fern (*Osmunda regalis*). Nothing can exceed the beauty of this native species when it is in the enjoyment of the conditions that favour its growth. It is a grave error to place this, as is often done, in an elevated position, for it is in its native habitats invariably found where the roots get a liberal supply of moisture even when at rest. In damp woods, swampy places, or by the side of streams or pools of water this Fern attains such noble proportions as to render it one of the finest of the many things in cultivation that are valued for the beauty of their foliage and elegance of growth. The dampest place in the garden should be chosen for this Fern, and if the ground is well prepared and ample space allowed for development, the plants will in due time throw up fronds 6 feet or more in height. The exotic species of Royal Ferns are equally hardy and as worthy of being well cared for. They also delight in moisture, but are apparently longer in coming to their full size. I have several specimens that were planted about twenty years ago, and they are very effective in the summer and autumn months. A plant of *interrupta* was placed on a rootwork at the back of a building which has no guttering, so that it gets, especially in a rainy season, a large amount of moisture. This it evidently enjoys, and I have never seen a finer specimen of this Fern. At the foot of the rootwork is a specimen of *Cypripedium spectabile* which flourishes exceedingly, and which after heavy rains stands for hours in a pool of watery The Lady Fern and its red-stemmed variety are certainly much more worthy of a place in gardens than many of the varieties to which they have given birth, and which are more

curious than beautiful. The same may be said of the Hart's-tongue, the type, to my mind, being infinitely much more ornamental than the majority of its varieties, in many of which the free, vigorous growth natural to this Fern is in a great measure suppressed. There is a richness of verdure in the Hart's-tongue that is particularly attractive, and which few Ferns, hardy or tender, possess in such a high degree. The Hart's-tongue will grow freely in almost any kind of soil, but to see it at its best it should be planted in well-enriched ground. The best specimens I ever had were fed into a high state of luxuriance by a liberal dressing of rotten manure. The fronds were abnormally large and exceptionally rich in colour. There are several varieties of this Fern that are fairly vigorous and not difficult to please. The best are probably *crispum* and *angustifolium*, but, to my mind, even at their best they are not equal to the typical form, which exhibits greater elegance of growth than any of its numerous varieties can lay claim to. Among the *Polystichums* there are some that may be freely used in the manner above indicated. *P. aculeatum* is a noble Fern when fully developed, and the crested form of the male Fern is but little less vigorous and enduring than the common form. In both large and small gardens there can be found room for some of these common, but noble-habited Ferns, which merely require to be well planted and left alone, and require little or no attention for years together. In the wild garden, by the side of water, and under the shade of trees these native Ferns should be freely used. They give variety and add a charm to any garden, large or small.

J. C. B.

### GARDEN ENEMIES.

THE exceptional weather experienced in February, which was responsible for a late season, and consequently one would hope for a more favourable flowering time for our fruit trees, has also had the effect of checking the early appearance of some of the enemies with which we have to contend. They are, however, I fear, not likely to be less numerous on that account; indeed, the few warm days have already brought red spider to the fore, and it is strongly in evidence on the Gooseberry buds. The fact that the many different species of bird and insect that go to make up the great army of garden enemies affect special localities is, perhaps, not sufficiently recognised. An accurate knowledge of this is necessary that the gardener should be on the alert to anticipate and, if possible, avert the attack. I notice a correspondent calls attention on page 176 to the wholesale destruction of buds by bullfinches, and reports to hand from friends tell the same tale. A clean sweep has been made of unprotected Plums, Gooseberries, and Currants. The partiality of the bullfinch for particular localities is apparent when I say that we have not lost a single bud or seen any of the birds all through the season. The damage effected in some localities by these birds has led to the covering up of the bush fruit quarters with close mesh galvanised netting. Would it not be advisable to go in for dwarfier Plums, bush trees that is, and plant them also under cover? This covering is, as a rule, a fixture both at the sides and top. I am inclined, however, to think it would be as well to leave the latter open and cover at certain times of the year with short half-inch mesh fish netting. This could easily be effected by placing a few more posts of the same height as the sides at intervals through the length of the quarter. This netting could be removed after the ripening of the fruit until danger to the buds was anticipated. If we can claim immunity from bullfinches, it is not so in the case of *Aearus telarius*, commonly known as red spider, the second enemy to make its appearance. It is, I think,

always troublesome in light, sandy soils (as may be evinced somewhat later in the year by the skeletonised foliage on the Quick hedges), and where this is so a sharp look out must be kept for its first appearance. March 15 was the first day it was noticed this year, an inspection of the trellis Gooseberries after an hour or two of bright sunshine showing countless thousands of the mite on the tips of the buds. Prompt remedial measures were at once resorted to in the shape of a rather strong dose of an insecticide that was applied with as much force as possible from the nozzle of a syringe, the aim being to give a fine spray to ensure a thorough wetting, and yet use considerable force. It may be noted that when an insecticide is applied at this season before the bursting of the buds, it can be used of greater strength. Make, for instance, two gallons of liquid where three or even four would be necessary in the summer. In the week ending March 23 the whole of the Peach and Nectarine, Plum and Dessert Cherry walls were treated to a similar dose, a little sulphur in this case being incorporated with the liquid. Where walls are old and crevices and nail holes are in evidence it is advisable to apply the mixture with sufficient force that it may find its way into these holes; also every inch of wall and portions of trees should be thoroughly wetted to make sure of the destruction of the enemy. Another garden enemy that is a source of great trouble to many fruit growers is the earwig, and it is unfortunately an enemy which is very difficult to dislodge. Last year, although the Peach, Nectarine, and Apricot trees were dotted all over with Bean and Artichoke stalks long before the fruit showed any sign of ripening, and scores of the insects were blown out each morning, the preventive measures seemed in no way to lessen their numbers, and individual fruits were tapped ere they would give to the pressure of the thumb. I intend to be still earlier in the field this year, and set the traps so soon as any punctures are noticed in the leaves. An idea used to prevail that the numerical strength of the earwigs could be considerably reduced, and the mischief caused by them, so far as wall fruit is concerned, proportionately lessened by clearing away old soil at the foot of the wall to the depth of some 3 inches or 4 inches and substituting fresh, also plastering a breadth of the lower portion of the wall with tar, but as the earwig at an early period of its life is provided with wings, it is probable that any such measures would be of little avail. If any correspondent can suggest a remedy of a drastic nature other than the bean trap above mentioned, he would be conferring a boon on those gardeners who are annually troubled with this very troublesome pest. We were nothing like so much troubled with wasps in 1894 as in the preceding summer, the wet season being no doubt answerable for the diminution of their numbers. A comparative scarcity in the preceding summer does not, however, necessarily mean a scarcity of queens, and with the advent of bright weather a sharp look out must be kept for them, any small sum paid for their bodies being money well spent, especially in those districts that may as a rule be regarded as happy hunting grounds for the wasp. In answer to a query as to the relative capability of outdoor sown *versus* transplanted Onions to resist the attack of the Onion fly, I notice on page 185 a correspondent declares emphatically for transplanted stuff. Doubtless he has good reason for so doing, but can he explain the reason? Is it that the stronger plants are less succulent, that the outer skin, which we know is pierced by the fly, is tougher in the older, larger, stronger plant, and is therefore comparatively safe from attack? In all gardens where the old-fashioned plan of outdoor seed-sowing is still followed, it is advisable to have a supply of fresh soot always on hand, and to give slight dustings of the same two or three times a week until the plants are fairly well advanced. Such dustings are at once a check to the settling of the fly on the grass and a help to the quick growth of the bulb of the Onion.

Claremont.

E. BURRELL.

## RUSHTON.

WE had never heard much of Northamptonshire for its old houses till we happened to go there, and were surprised to see some of the most beautiful houses in England, simple in architecture, dignified in form and charming in colour. Among these stately and beautiful houses was Rushton. The vegetation both of woods and pleasure gardens near helps much. The walls, beautified by time and Lichens, look as perfect as anything can be, more so than the much-talked-of French chateaux, which are very hard in effect.

The absence of flower gardening, except of the ordinary kind which leaves the beds bare in winter, prevents such beautiful effects as we might easily have about such old houses by the use of Roses, flowering climbers, and charming

extremities with a handsome Lichen-covered Doric screen. The ground falls gently down to the stream, and there the effects are very picturesque with the rich water-side vegetation and a pretty old bridge. The place is fortunate in having a fine kitchen and fruit garden, the crops in both departments under Mr. Cruickshank's care being excellent. There are also pretty borders of perennials here, which often come in so well in kitchen gardens suitable for them.

## FLOWER GARDEN.

## ON THE SEEDING OF DAFFODILS.

DECEMBER 10.—This is the first season that I have attempted to secure a harvest of Daffodil

the truth, I do not very confidently count on ever seeing Daffodil blooms from these seeds. Still I do not grudge the labour of hybridising, considerable as that labour has been. Every flower hybridised was duly labelled with the names of both parents, and this in itself was no small trouble. But it was interesting work, and I do not begrudge the pains I took even if I never see a flower from my seeds. Familiar as I was before with the more salient points in the various species and varieties, the attempt to cross varieties brought out characteristics that would have been otherwise unknown to me. For instance, I have in former notes remarked on the difficulty of distinguishing *Empress* from a well-grown *Horsfieldi*. I believe that I have now discovered this point of difference at least between them—that *Horsfieldi* if impregnated



Rushton. Engraved for THE GARDEN from a photograph by the late Mr. J. L. Robinson, C.E., Dublin.

evergreen things which are essential in the permanent kind of flower gardening. In very few of these lovely houses are the opportunities they offer for true flower gardening in simple and delightful ways taken advantage of.

Rushton, built mainly of local Weldon stone, is charmingly situated upon a gentle eminence which rises from the Ise, a small stream watering the park. It was commenced during the second half of the fifteenth century by Sir John Tresham, further enlarged by Sir Thomas Tresham, who died in 1605, and finished by the Cockaynes about 1630. The work of the time of Elizabeth and James dominates the design, and the simple masterly treatment makes the house one of the stateliest in the country. It is built round three sides of a quadrangle, the centre facing east and west, the north and south wings running from the main building easterly, connected at their

seed. In former years I have plucked stray pods and burst them open to see the beautiful jet-black and shining grains. But the pods were certainly not plentiful on any variety with the exception of the common *Jonquil*, which bears self-fertilised seed abundantly, and sows itself with very satisfactory results if only the nidus for the seed be at all suitable. Of course there is no object in sowing such self-fertilised seed. New varieties are not likely to be produced from it; an increase by means of offsets is rapid enough to make the tedious process of raising bulbs from seed unnecessary. This year, however, I have diligently cross-fertilised, with the result that I have harvested a large collection of seeds of various sorts. I suppose I shall sow them if I can find time, but as to their ever giving me flowering bulbs, that is quite another question. Five to seven years is a long time to have in prospect, and, to tell

with good pollen will bear seed-pods enclosing sound, plump seed; whereas *Empress* is mostly, if not absolutely sterile. At least, of the many blooms of *Empress* that I treated in various parts of the garden and in various exposures, not one pod came to anything, whilst flowers of *Horsfieldi* when cross-fertilised bore seed in very respectable quantity. The palm for seed-bearing must be given, I think, to *princeps*. It was delightful to me to gather the fat capsules of this Daffodil, fertilised with all sorts of pollen, and squeeze out the beautiful black seed in showers. One capsule of this variety held no fewer than 52 grains, the pollen used in this case being that of *spurius*. And not only is *princeps* a good seed-bearer, but as far I can judge its pollen is very effective, though, as regards powerful and abundant pollen, *maximus* appears to me to come in first. My flowers of this variety, unfortunately, were few in number,

but so abundant is the pollen that one flower goes a long way. Of numerous flowers of Emperor and of Morning Star—a Daffodil very like princeps—fertilised with maximus, I do not think that one failed to set for seed. The pollen also of triandrus seemed to me to be of excellent quality, though here again my flowers were too few in number to enable me to generalise. I cross-fertilised a very considerable number of moschatus with various kinds of pollen of N. minor, Jonquil, Polyanthus gloriosus, and others, but the results were disappointing. The capsules seemed to grow and swell with marvellous vitality, and I looked for a rare lot of seed, but those that perfected seed were not many and the seeds in each capsule that did ripen were few in number. Emperor is a fine seed-bearer, nearly as good as princeps, though each capsule does not contain so many seeds as in the case of princeps. Pallidus præcox var. asturiens also seems to be very fertile, though I should think that the pollen of the delicate sulphur trumpet Daffodils is, generally speaking, weak.

Of course it does not follow, because you impregnate one Daffodil with the pollen of another, that you have thereby secured a hybrid even when the seed sets; the seeds produced may after all be the result of self-fertilisation—that is, unless one grows the Daffodils in pots and removes the anthers before the pollen has become loose, a laborious piece of work which only those could undertake who could give to it unlimited time. But when I compare the small amount of seed produced in former years by the Daffodils in my garden with the abundant return from several varieties this year, I conclude that the cross-fertilisation which I so industriously carried out has been pretty effectual.

The earliest seed to ripen was that of obvallaris, the latest that of Emperor. I have harvested a large amount of seed, but I believe I must have lost more than I gathered. In the first place a storm of snow and wind battered down many stalks that were plumping for seed in quite a promising way. As for staking each head, the labour involved would be too great. A good plan is to tie several neighbouring heads in one bundle, when they will support each other. But besides the amount of seed lost from the battering down of stalks, a good many ripe pods scattered their grains before they could be gathered, and I found that when this happened I could seldom discover the spilt seed on the ground: it had probably been eaten by birds. To prevent loss of seed in this way the best plan is to gather the pods before they are dead ripe.

The following is a list of the combinations from which I obtained seed in greater or less quantity. The first named is, of course, the seed-bearer:—

Albicans × Emperor.  
Emperor × cernuus.  
Emperor × maximus major (?).  
Emperor × poeticus ornatus.  
Emperor × maximus (very prolific).  
Emperor × princeps.  
Emperor × moschatus.  
Horsfieldi × poeticus ornatus.  
Horsfieldi × triandrus.  
Maximus major (?) × Empress.  
Maximus major (?) × ornatus.  
Bicolor Morning Star × maximus.  
Moschatus × obvallaris.  
Moschatus × Jonquil.  
Moschatus × Corbularia citrinus.  
Moschatus × poeticus ornatus.  
Obvallaris × moschatus.  
Obvallaris × Polyanthus N. gloriosus.  
Obvallaris × N. minor.

Pallidus præcox × triandrus (one seed).  
Pallidus præcox asturiens × N. minor.  
Pallidus præcox asturiens × Polyanthus N. gloriosus.  
Pallidus præcox asturiens × Jonquil.  
Princeps × Corbularia citrinus.  
Princeps × pallidus præcox.  
Princeps × spurius (one pod of this cross contained fifty-two seeds).  
Princeps × N. minor.  
Princeps × moschatus.  
Princeps × Leedsii amabilis.  
Princeps × Emperor.  
Spurius × moschatus.

I am sorry that I have not noted all those combinations which failed to set seed. Spurius appears to be a poor seed-bearer, but whether mine failed from an inherent tendency to sterility or because the flower-stalks were a good deal dashed by the wind, I cannot decide. Obvallaris, on the other hand, seems as if it might become the parent of varieties. Maximus is a splendid variety for pollen, but whether this variety readily sets seed I cannot say, my stock being too small to allow of my making experiments to any extent. Want of the necessary leisure prevented me from dealing with any of the poeticus section as seed-bearers. I have marked the variety maximus major with a query, because I do not think there can be any Daffodil with such an atrocious name, but that so named with me is a handsome Daffodil, much resembling maximus in habit of flower and foliage, but bicolor in colour.

Dunedin, N.Z.

A. WILSON.

**Gaillardias.**—Although I have grown these for some years, this is the first winter that I have known them to be affected by frost. With me they have hitherto retained a small amount of leafage through the winter months, but the old stools after the protracted hard frost looked as if they were quite dead. These Gaillardias are very peculiar, for although in my case the crowns and the thick roots are killed and rotten, I find that lower down the roots are already pushing out new growths, so that the existence of the plants is practically ensured. I have not tried, but I believe that the smallest bit of root would, if cared for, form a plant. A year or two ago I transplanted some old roots and the ground remained undisturbed. To my surprise, quite late in the summer a crowd of small Gaillardias came up. In taking up the plants I had broken off some of the smaller roots and these became plants. If we were to experience such winters as the past one it would be necessary to protect slightly, as when the plants are so injured the flowering time is much delayed.—J. C. B.

**Senecio Doronicum.**—Among the earlier flowering of the composites this Senecio is one of the most showy. In height it is scarcely more than 1½ feet when fully grown. In appearance it is neat and compact, and when its orange golden blossoms are fully expanded, it is very attractive. It is by no means so frequently seen as it should be, for at its time of flowering we have not much of its shade of colour in the herbaceous border. The plant gives little trouble to the cultivator and requires no staking or tying when in bloom, it being, in fact, quite self-supporting. Being among the number which flower early in the year, it is better transplanted in early autumn, so as not to imperil its flowering. It may be increased by careful division in autumn, or, if quantity be required, by root cuttings in winter in the usual way.—E. J.

**Marguerite Carnations.**—I sowed the seed of these early in February and find that better results follow than from sowing later. I find the plants succeed much better in pots than in the open, especially if required for flowering in the late autumn and through the winter months. I have to-day (April 6) gathered a nice lot of blooms

from plants raised in February, 1894, and which have given a lot of bloom all through the winter in an ordinary greenhouse. These Marguerite Carnations are valuable in September after the ordinary Carnations are over.—E. M.

**Violet Queen Victoria.**—Those who admire double Violets should give this a trial. It is remarkably rich in colour, and for winter and early spring flowering affords a fine contrast to the Neapolitan, Marie Louise and Comte de Brazza. It would, I think, be difficult to find four Violets better fitted for culture under glass than the above. Queen Victoria has rich green foliage, flowers with as much freedom as the Neapolitan, and I fancy would succeed where the latter cannot be induced to grow with sufficient vigour to allow of the plants producing a good crop of flowers. The great enemy of all the double Violets is red spider. In some gardens where the soil is light it is almost impossible to keep the plants free from this terrible pest. In spite of rich soil, frequent waterings and sprinklings, there comes a time when the enemy gains a foothold and the growth of the plants is at once affected. The only remedy, or rather preventive, that I have found efficacious is shading from very hot sun either with canvas or with Birch sprays laid over the beds.—J. C. B.

## THE ROCK GARDEN.

### IV.

MARCH 28.—Spring at last. Though many pretty flowers bloomed in the rock garden as early as January, their beauty was of short duration, and King Frost held his undisputed reign for many weeks. But after weary waiting, genial sunshine has at last awakened the alpine from their winter sleep, and one by one the gay spring flowers unfold their charming blossoms, which are all the better appreciated for their somewhat late arrival.

Among Saxifrages now in bloom there is perhaps more variety of colour than at any other season. The host of white flowers among the mossy kinds has not yet made its appearance, but there are much choicer gems among the section which flowers earliest of all, and in every well-designed rock garden these should be combined into large groups for early spring effect. The best way of arranging them would undoubtedly be to combine the different colours into groups of varying sizes, so that the colour of each group would blend harmoniously, and here and there be intermingled with the adjoining group. An important point, of course, would be the *tout ensemble*, or connecting the various groups into one grand and effective picture.

Let me suggest the material for this picture of early Saxifrages. The following varieties are all now in full bloom (here in Devonshire), and may be said to be very fit companions for each other: *Saxifraga Burseriana*, *S. apicularis*, *S. oppositifolia*, *S. o. alba*, *S. o. pyrenaica superba*, *S. sancta*.

As all of these make exceedingly neat and compact tufts of evergreen growth, they are also well adapted for forming a carpet on which a few later-flowering things may be displayed to advantage. *Saxifraga Burseriana* does certainly best planted into a slightly sloping crevice which has been filled with gritty calcareous soil and is fully exposed to the sun. In such a position it is flowering most abundantly at the time of writing, not only here in Exeter, but also at Torquay, Newton Abbot, and other places. There is something exquisitely neat about *S. Burseriana* which makes it a picture in itself, and one of the first-class gems for the rock garden. The glaucous cushion of densely-crowded prickly foliage is ornamental even without the

blossoms, but when the flowers appear with their red stem and calyx, the large pure white corolla, and golden yellow anthers, the picture is altogether unique. *Saxifraga apicularis* forms a carpet of the brightest green on which the flowers of a primrose-yellow are most abundantly produced. I find it doing best on ground not quite so slanting as that recommended for *S. Burseriana*. At Exeter it is growing in gritty loam.

The well-known *S. oppositifolia*, with its charming rosy purple flowers, forms a delightful contrast to the primrose colour of *S. apicularis*. In many rock gardens *S. oppositifolia* does not thrive well, but in nine cases out of ten the fault is in the planting. It should invariably be planted on the shady side of a rock without being overshadowed, and I know several in-

(though during less severe winters their flowering season would be much earlier) very few can equal the well-known *Chionodoxa Lucilla*, *Chionodoxa sardensis*, *Scilla sibirica*, and *Scilla sibirica alba*. The bright blue varieties almost equal the colour of the *Gentian*, and are very fit neighbours for the *Saxifrages* just mentioned, which contain no such colour. A most natural and effective way of displaying these bulbs to their best advantage is to scatter them irregularly over patches of soil that have been covered with neat-growing carpeting plants, such as *Antennaria tomentosa*, *Sedum dasyphyllum*, *Sedum pruinaum* and similar kinds. The rich colours of the bulbous flowers show up all the brighter for the duller tints carpeting the ground beneath them.

Several *Cyclamens* are still in bloom this

and *Dondia Epipactis*, with its curious umbel of golden yellow flowers resting on a comparatively large involucre of broad green bracts, presenting a very pretty effect.

Exeter.

F. W. MEYER.

(To be continued.)

#### DORONICUM PLANTAGINEUM HARPUR-CREWE.

THE illustration here given shows the best of a handsome family of hardy spring-flowering plants. There are several fine *Doronicums* growing in gardens, but there are more names than distinct varieties, which leads to some confusion. It is important to know and grow the best of them. The varieties found in gardens can mostly be referred to two species, namely, *D. pardalianches*, which is distinguished by its rounded woolly leaves and tall flower-stems, 3 feet to 4 feet in height, and *D. plantagineum*, with larger flowers on shorter stems and more ovate leaves, resembling those of the Plantain. The variety named Harpur-Crewe originated in the garden of the gentleman whose name it bears, and its great merit is that of continuous blooming. From early spring to late autumn it will maintain an abundant succession of its fine flowers if rightly treated. In common with all the *Doronicums*, it is easily increased by division, which should take place frequently at different times, so as to secure strong batches of young plants succeeding each other in flowering. Besides the brilliant effect it gives in beds and borders, mention must be made of its merits as a cut flower, for which it is useful and lasting. Those who have reserve gardens to supply flowers for the house will find this plant of great service.

A. H.

#### SCHIZOSTYLIS COCCINEA.

FOR the cool greenhouse or conservatory in the early months of autumn this beautiful Crimson Flag—or Kaffir Lily, as it is sometimes called—is among the most useful. Few plants can equal it for brilliant colouring at the time stated when seen in good condition. In a few gardens here and there may be seen a small batch of it in fair condition, with perhaps half-a-dozen or so spikes issuing from an 8-inch pot, and these by no means of the best quality. That so beautiful and useful an autumn-flowering plant should be so generally neglected is a matter for regret. The usual way of treating this plant is to transplant it in clumps, hence the reason of so much useless growth and so very little bloom. Often in one large pot may be found sufficient material for a dozen, supposing it to have been well grown, instead of the indifferent treatment usually accorded it. Just at this season of the year the plant is commencing fresh growth and it is a good time to take it in hand. To do the plant justice and to produce strong-flowering plants that will send forth spikes bearing a dozen to eighteen of its brilliant scarlet blossoms some little cultural treatment is necessary. Where large pots of it exist these should be shaken out when all fear of frost is past, and, selecting the largest-sized plants, transplant them 6 inches apart on a warm south border in soil fairly deep and rich. At planting time if the weather be dry a good watering may be necessary, but afterwards they will take care of themselves. The plant succeeds well in strong, rich loam and in this soil grows vigorously, rarely showing any signs of disease in the leaves. By the autumn the largest plants will have growths as large as a man's thumb, shorter than usual it may be, but sturdy and certain to flower well. The smaller pieces from the spring planting should be pricked off into boxes or into nursery beds to form the batch for another year. Though the plant is comparatively



Flowers of *Doronicum Harpur-Crewe* in a vase. From a photograph sent by Mrs. Wakeman-Newport, Sandbourne, Bewdley.

stances where plants that refused to thrive made excellent progress directly they were transferred to the north side of the rock garden. The white variety (*S. oppositifolia alba*) seems still rather rare, but the improved species, *S. pyrenaica superba*, with its large and handsome flowers, is deservedly popular and is just now at its best. *Saxifraga sancta* is not grown nearly so much as it deserves to be. It forms a delightful contrast to the last-named kind, the colour of its blossoms being a very deep rich golden yellow. It slightly resembles *S. apicularis*, but both its foliage and its flowers are darker than in that variety. At Exeter it covers a stony ledge fully exposed, and is flowering at present most abundantly. I have seen other plants of this species do equally well in a half-shady position, but the flowers would appear later. Of effective bulbous plants flowering this week

week, and so are also many kinds of *Hepaticas* and that charming dark blue *Anemone A. blanda*. As all these prefer a shady or half-shady position, they might well be grouped together. *Hepaticas* and *Cyclamens* often will grow in the shade of trees where other plants refuse to thrive, and their colours vary so much, that quite a picture might be formed of *Hepaticas* alone. There are this week no less than eight distinct varieties blooming together in Exeter: pure white, single and double reds, and single and double blue in various shades, the variety *Hepatica Barlowi*, with its deep blue flowers, being particularly striking.

Among rock garden plants now flowering in a sunny position I may mention *Draba Aizoon*, with its bright yellow flowers; *Megasea Stracheyi*, with its charming white flowers tinged with the slightest touch of delicate pink;

hardy it cannot endure severe frosts, and for autumn flowering should be lifted early, potted, and placed in a cold frame for a few days to encourage new roots. After flowering is completed remove to a pit secure from frost. In spring these plants may be potted into larger pots and plunged in the open in coal ashes. Having kept the plants two seasons in the pots, they will be best shaken out and planted in the open as recommended above. In this way continued vigour may be kept up and its useful spikes of flowers fully repay the labour entailed. E. J.

## TREES AND SHRUBS.

### JAPANESE MAPLES.

A GREAT number of hardy shrubs are brought on under glass and employed for the embellishment of the greenhouse or conservatory during the winter and early spring months, but in nearly every case it is the blossoms which form their most attractive feature, hence the various Japanese Maples stand out almost unique among plants of this class, as their principal beauty consists in the charming foliage. The most of these Japanese Maples are varieties of *Acer palmatum*, more generally known under the specific name of *polymorphum*. They differ from the normal palmate-leaved type in various ways, some having the foliage richly coloured, particularly in *atro-purpureum* and *sanguineum*, while in one form, *roseum marginatum*, the small leaves are all deeply edged with pink. In some, again, the foliage is very finely divided, and amongst this class there are varieties with coloured leaves as well as some forms in which the foliage is green. The habit of the plant, too, varies in the different varieties. When required for indoor decoration they may be grown altogether in pots, and readily lend themselves to this mode of culture. When no longer required for the greenhouse they may be plunged out of doors and allowed to remain there till the autumn, when I prefer to remove them under slight shelter, for though hardy they are when in pots the better for a little protection, for the sake not only of the plants, but also of the pots in which they are growing. These *Acers* are all propagated by grafting on to the typical *A. palmatum*, with which the whole of the varieties readily unite. They are largely grown by the Japanese, who from their desire for singularity are fond of grafting several varieties on to one plant, the result being a curiosity, but to my mind far less pleasing than when each variety forms a specimen by itself. Plants grafted as above described in Japan often make their appearance during the winter in the London auction rooms, being sent from that country in company with Lilies, Tree Peonies, and various other subjects. The *Acers* are, however, as a rule, not a success, for the stocks on which they are grafted are usually old and gnarled, with but few roots; hence they bear the journey so badly that the mortality among them is generally very great, and the living ones by no means realise high prices. They are usually sent tied up in bundles of half-a-dozen or more, with the roots surrounded by Moss, and packed in such a way that they are held securely in position while the air can circulate around the branches. In this way, however, the hard, woody nature of the plants does not enable them to travel like the Tree Peonies, which are of a stouter and more succulent nature. The fact that these Japanese Maples are hardy is to a great extent overlooked by planters, yet they form very beautiful objects in the open ground. So situated, the

palm must, I think, be awarded to those two coloured-leaved varieties *atro-purpureum* and *sanguineum*, which glow with a mass of colour till the leaves drop. The richest tints are furnished by plants fully exposed to the sun, but not where they are parched up during the summer, as these Maples delight in a cool, fairly moist spot, and succeed even in soils of a heavy consistency. T.

### THE WHITE PINE.

WE fear we have from time to time undervalued this tree. Although we have seen it in its native country where its magnificent stature is very striking, a great many places in England never show any fine trees of it. We have lately seen some very fine ones at Cliveden, which makes us think more of its value as one of our really hardy exotic Pines. It is all over Canada, and is, perhaps, one of the finest trees one sees there, especially if one is lucky enough to come across a colony of old trees. We hear a very good account of the way it does in Germany, and perhaps some of our readers can tell us of good plantations of it in various parts of this country. There cannot be any doubt about its hardiness.

The misfortune of this garden planting of conifers is that they are never done in any sensible, thorough woodmanlike way. The pine-tree, with its grafted trees all stuck about like toys, is no good whatever, and even in the best pineta the experiments are vitiated by the large amount of soil given to many of the trees, as at Dropmore, where Mr. Philip Frost gave scores of loads of good loam to the Douglas Fir. This prevents any fair test of the natural conditions of our own country. Deep masses of made ground like this retain moisture so long, that the first test of all, and perhaps the most important as regards coniferous trees, is the power of the tree to do with our rainfall. That is why we see so many garden trees thriving very well for a few years as long as the artificial mass of soil in which they are planted holds out, but when the trees begin to root into the natural soil of the country and to try to put up with our rainfall, we see many of them turning backwards, dying and perishing. Planters should try much more Pines like this in masses, just as they would Larch or Scotch, adapting the tree to the soil as far as possible, but adding no artificial aid whatever; because, as we take it, a tree can be of no use in our woodlands that will not live on the same terms as our Oak, Beech and Scotch Fir, that is to say, give us a good result from the natural soils and conditions of the country. Woods or plantations of the White Pine from that point of view we should like very much to hear something about.

*Spiræa Lindleyana*.—This Himalayan species, so well described on p. 222 of THE GARDEN, is without doubt the best of the whole family of shrubby kinds. The finest example I ever saw was at Orton Hall, Peterborough. Growing there at the back of one of the rock gardens, it reached fully 15 feet high. The semi-drooping panicles of blossom had a charming effect.—E. M.

*Choisya ternata*.—Though this is hardy in many districts of England, in others it needs a certain amount of protection, and where this is the case it is well worth attention for flowering under glass, as it gives but little trouble and will bloom freely. For a structure from which the frost is just excluded during the winter it is very valuable, as a thriving specimen is, from its rich green foliage, decidedly ornamental even when out of bloom. The fact that it is hardy in many parts of the country stands it in good stead for a house in which it is difficult to maintain much

heat during the winter. After flowering it may as soon as all danger from sharp frosts is over be plunged out of doors to remain, till the autumn. About fifteen years ago the Mexican Orange Flower, as the *Choisya* is sometimes called, attracted a good deal of attention as a flowering shrub for the greenhouse, but proving hardy in so many districts it was less grown under glass. The last winter, however, has so severely crippled it, that it is probable (in common with many other so-called hardy evergreens) we shall not see it outdoors so much as formerly, in which case it may be more grown as a greenhouse shrub.—T.

**Furze and the winter.**—The destruction of the common Furze throughout the country must be great, judging by what we see in the southern counties. We grow several kinds of Furze—the Foxbrush and the autumn flowering, or, as it is sometimes called, Irish Furze. They seem to be about equally affected by the frost; that is to say, in many cases dead to the ground, or nearly so. When people talk of the use of the Furze as a fodder plant, its tenderness in hard winters should be taken into account. It is not pleasant to see large masses of this plant dead, and so the simplest way out of it is to put a match to them. After that the man who cuts down the stems finds his work very much easier. We set fire to a mass the other day, and never saw handsomer flames or quicker execution. It was a sunny afternoon, and the flame ran through the mass in six minutes. It is best to do this with Furze, because when it starts from the bottom it breaks all the fresher and better. It is better to chop down the stems after burning. With all its tenderness it is too charming a bush to give up, and we go on sowing our Furze. Near the sea, perhaps, it is not so much injured as in inland places, and its frequency near the sea on the Continent is no doubt the reason why the French call it the "Sea Rush."—*Fitch*.

### THE PONTIC RHODODENDRONS AND THE FROST.

THE Laurels, which are now dead by millions, are not by any means the only frauds among our evergreens. Perhaps, after the Laurel, the most popular shrub with the country gentlemen in England is the Pontic Rhododendron, and no doubt many people think that by using it for covert they are doing what is safest and best; but the plant is not hardy by any means, and therefore should not be depended upon for this purpose in any cold or low-lying districts. No doubt in certain elevated and favoured districts it lasts longer than elsewhere, but a great many are dead in the most favoured counties of England just now, or, if not dead, are cut very low by the frost and have a brown, unpleasant look which is quite unlike that of a truly hardy evergreen like the Holly, the Savin and the Box. As we never liked the Pontic Rhododendron very much, we made several little plantations of other kinds in the same position, as regards height above the sea, with a view to testing on them the power of frost. The result is that whilst our *catawbiense* are saved and hardy Rhododendrons on their own roots, such as Cunningham's White, are perfectly fresh and healthy, the Pontic Rhododendrons touching them are an ugly brown and dead to the ground.

We can now see the evil effects of using ponticum as a stock, because even if we selected hardy Rhododendrons and grafted them on a ponticum stock we should still probably lose them. Cunningham's White in our own plantation is on its own roots, but the ponticums that are dead are also on their own roots. Between the ponticum which is so much used as stock and the tender kinds of Rhododendrons of partly Indian origin a great deal of waste goes on in our plantations. We should select only hardy kinds raised from the North American species, and there are many beautiful ones of this kind which, if grown on their own roots, *i.e.*, raised from layers, might be depended upon to stand any winter. But we might also appeal to our great nurserymen to get

us substitutes for this tender ponticum, which is wrongly used to such a vast extent. They might easily propagate catawbiense and other hardy forms to take the place of the tender ponticum, which is clearly a much less hardy plant than the American species of Rhododendron which grow along the Alleghanies and other mountains in the Eastern States. The mischief of the ponticum is its facility of growth, which makes it so easy to raise, just as the common Laurel is easy to raise; and the growth is so obviously rank and quick, that the loss is all the greater in the end. Ponticum, as we have seen, is not hardy on its own roots, and when used as a stock in the end kills from its vigour the plants that are grafted upon it. So in the end we have ponticums everywhere in pleasure grounds where there ought to be fine old specimens of beautiful Rhododendrons.—*Field.*

**The common Box and the winter.**—Among the evergreens which have not perished this year from frost is the beautiful common Box, which is so seldom seen rightly grown in our shrubberies. The fact is, we have too great a wealth of so-called evergreens, and in such a rich mixture usually planted so that the good things can scarcely disentangle themselves from the crowd of tender rapid-growing things sure to perish in hard winters. In the usual shrubby crowd the Box is rarely seen properly developed and well grown; it is crowded, overshadowed, and mostly in places unsuited for it. In such circumstances it cannot be what it is in a wild state, a very charming shrub when fully exposed to the sun on an open hillside. Often in our gardens our wild trees are better grown than they are in the woods, but with the Box it is not so; no one has any idea what a beautiful bush it is who has not seen brakes of it wild, with its plummy, graceful toss of branches. And, therefore, to get its best expression, it ought to be treated in somewhat the same way, by planting bold groups of it—not generally mixing it at all with other shrubs, and certainly not allowing it to be overshadowed by trees of any kind. In that way we should get the simple and, as we think, the charming expression of this tree, which is a native of some of our southern hills, though not common. It would be an excellent thing to group here and there in coverts in open, sunny spots.—*Field.*

## KITCHEN GARDEN.

### TURNIPS.

ALTHOUGH the Turnip is one of the most free-growing esculents the gardener has to deal with, it is not always an easy matter to ensure a constant supply of juicy, well-flavoured roots throughout the year. The summer sowings are in some localities very liable to be attacked by fly, and for this pest there seems to be no effectual remedy. Dusting with tobacco powder or syringing with some insecticide if done in time would doubtless destroy or sufficiently check the insects, but this is in the case of large breadths too troublesome to be of much service. Dusting with soot has been tried with partial success, but it is difficult to get it on to the undersides of the leaves where the aphides do their work. In moist seasons Turnip culture is an easy matter, but when July and August are hot and dry the plants are apt to come to a standstill, the bulbs harden and never afterwards regain their natural crispness. The ground for the earlier sowings should be rich and thoroughly stirred. It should be borne in mind that there is safety in frequent sowings. It is a curious fact as regards the Turnip fly that whilst one lot of plants may be totally destroyed, another sowing made but a few days later will quite escape. This is frequently to be seen where large breadths are grown for market. I

have more than once remarked a large field annihilated in the course of a week, whilst a neighbouring field in which the plants came up some ten days later quite escaped.

Why this should be the case I have never been able to understand, but the ways of insect destroyers are sometimes mysterious. One may see this in the case of Roses, Strawberries, and other things which in one part of a garden will be badly affected by fly and mildew, whilst in other portions the plants may wholly escape. For frame culture, and especially where Turnips are forwarded by means of hotbeds, Early Milan is probably the best variety we have. The bulbs begin to swell before much leaf growth is made, and it is thus peculiarly well adapted for culture under glass at a time of year when the days are short and things brought on in warmth are apt to run overmuch to leaf. One cannot, moreover, err in employing this variety for the first sowing in the open air, although Snowball is very good for this purpose and many prefer it to any other kind. For an autumn supply I doubt if there is any better Turnip than the Early Six Weeks, this being much in favour with market growers, and Jersey Navet is one of the best late varieties. In a time of heat and drought, such as often prevails in July and August, there is a difficulty in ensuring the free germination of the seeds. In the case of small breadths the best way is to sow in drills, filling these up with water before sowing. This will give moisture enough to bring the plants through and start them freely into growth. Where Turnips are grown on a larger scale this plan is, of course, hardly practicable. Large growers hereabouts make a practice in a time of drought of following their land destined for autumn and winter Turnips, so that it is when required quite free from weeds of all kinds and a certain amount of moisture is retained in it. When sowing time arrives the ground is ploughed and fine harrows are kept at work for several days, so that the soil is brought into as fine and friable a condition as possible. A fine surface not only induces quick germination, but in some measure acting as a mulch helps to retain moisture in the soil below. It is prudent to make two sowings for winter use, one towards the end of July, the other a fortnight or three weeks later. One never knows what the weather will be like in the autumn. In a cold, wet season the earliest sowing will produce roots of just the right size; whereas after a fine autumn, when copious rains with bright sunshine and warm nights prevail, many of them will become far too gross and coarse for table use. Market growers usually make several sowings so as to make sure of a constant supply of sound saleable roots all through the autumn and winter. Any roots that may have got too big are fed off by sheep, so that there is no loss. Where Turnip greens are in frequent demand a sowing should be made in the last week of August, as the small bulbs stand severe winters much better than full grown ones. In this district all the Turnips are killed or crippled with the exception of the late sown. One man is fortunate in having about 7 acres of them, and they are in this time of scarcity quite a little gold mine. J. C. C.

*Sauvret.*

**Early Turnips.**—This vegetable is always appreciated early, and it may be had some weeks in advance of the usual time by sowing on a sloping sheltered border or at the foot of a south wall. Our early varieties, such as Snowball or Early White Stone, commonly called Six Weeks, though excellent for June supplies, are not the best for sowing for first crop. For years I grew the Early Paris Market, an oblong, early white French variety, but it is not so early as the Milan

section, of which there are two kinds, the Extra Early Milan and the White Milan, the former the earliest Turnip I have grown. It is a strap-leaved variety and quite a fortnight earlier than other kinds. It differs from the white in having a purple top and is round with a flattened root, whilst in favourable seasons it is one of the best for use in May. The White Milan is almost identical. I think it merely lacks the colour of the pink-topped variety. Those who can spare a frame will get a good return for the same, as the roots turn in so quickly, and I have noticed they are less subject to bolt or run when sown on heavy clay soil. To get the best results it is well to prepare a plot, and for heavy soils there is no better material than burnt garden refuse freely mixed with the soil.—G. W.

**Winter Onions.**—Many growers, myself among the number, will have cause to lament the loss of their winter-sown plants. Those in the northern part of the country who had more snow may be in a better position, but as far as I can learn for miles round not a root remains of some of the most popular kinds. Our plants stood well till the thaw, then all collapsed with the exception of the small Queen, a variety one would not have expected to stand. All others, such as the Tripoli section, White Lisbon, and Italian, have not a single good plant left. But we are fortunate, as at this date we have a quarter of green Onions that will prove most acceptable. They are in an out-of-the-way, exposed position and are not injured in the least. This being a singular circumstance, I will briefly relate how it occurred. Last season we had to thin heavily the spring-sown plants, which came up too thickly, and thinking the thinnings might be of service, these were laid in thickly in rows, and not being wanted no notice was taken of them. These are now growing freely, very few have died, and the roots will prove most acceptable, as there is a good breadth, showing that Onions at a certain stage will stand severe frost.—W. S. M.

### PLANTING SEAKALE IN SPRING.

Few persons who require Seakale in quantity adopt the old method of forcing in the open the same roots year after year, but resort to what may be rightly termed an improved mode of culture by planting root cuttings yearly, and thus securing in a shorter time good material for forcing. Some object to new ways, and think the old ones superior, but they would change their views had they a large family to supply with this vegetable for six months, from the middle of November till May. The winter we have just passed through shows the value of this vegetable, as at this date (March 30) there are few vegetables of any kind in the open ground, and Seakale is doubly valuable. If placed in heat in quantities as required about every fortnight there is always a supply of good quality if not forced too hard and in a dark place to get pure white growths. Much of the after success depends upon the way the roots are started and the time of planting. There is no difficulty in getting strong roots for forcing the same year if the plants are given a good start, and no matter what system is adopted, whether from root cuttings or from seed, it is well to get the planting roots intended for next season's forcing into growth at an early date. If seed is sown now thinly and the seedlings given ample space, they make good material for planting another season, but it is necessary to lift and trim the roots, cut off the crowns, and treat as advised for root cuttings. I favour root cuttings because they are so readily obtained, and at a time it is convenient to prepare them for early spring planting. Strong forcing roots provide just the material required, and make roots in one season if fed well and planted in good soil after being started in frames. Seakale to do well must have food. It roots deeply and likes a strong loam; but given ample food it is not fastidious as to soil. I find we get good roots on a light gravelly soil, but more food is required. Good planting roots

half a foot long are best, and, of course, the stronger the better if small plants or seedlings are used; the crown must be cut away, and root cuttings are cut even on the top. I prefer to place the food under the young roots and in liberal quantities, and to give plenty of room in rows not less than 2 feet apart between the rows and half the distance between the plants. In planting with a dibber make sure the root cutting is on the bottom, not leaving a space between the soil and plants. To get the best results, it is well to place the young planting roots in frames during the winter. About three weeks before planting they are placed in rich soil in boxes in rows rather close together, and planted about the third week in April. Each plant will then have a mass of fibrous roots, and with prepared plants like these it is well to plant in drills, using a spade. This is better than a dibber, for the roots are spread out, and in poor soil such aids as wood ashes, fish manure, or guano may be placed in the drill. During growth the plants are restricted to one crown, the strongest, and frequent dressings of soot and fish manure are given in showery weather. G. WYTHES.

### TOMATOES AND DISEASE.

RECENTLY we had an instructive paper at a meeting of the Royal Horticultural Society on "Diseases of the Tomato," and I, in common with others, attended to gain some information, as I have suffered badly at times and have been obliged to clear whole houses to arrest decay of fruits. Mr. Collinette in his paper introduced two diseases we have not had much experience of, or at least I have not, and trust it is a local disease that will not be imported. One closely resembles the curl, and may be the same under another name and have different effects in the warmer climate referred to, so that we may not be as free from its evil effects as imagined. In the discussion which followed, Mr. Douglas stated that his plants did not suffer from disease, and thought it was a cultural defect, but I fail to see this, as persons who only grow Tomatoes, and often in a large way, paying every attention to culture, suffer badly. Mr. Douglas stated he had on one occasion been troubled with white-fly; he soon got rid of it, and was now growing plants yearly and had no disease trouble whatever. I wish most growers were in a similar position, as in many cases I find the disease increasing. Another gentleman at the meeting thought a close, humid atmosphere aggravated the disease, and doubtless such is the case, but not to the extent one may imagine, as plants in the open are subject to various diseases. I have found there is no means of escape even in the most favourable seasons; for instance, in 1893 one could air as much as one liked and still there was disease. I am of the same opinion as Mr. Collinette. Disease is hereditary; it is transmitted by diseased seed, and to a certain extent assisted to spread by bad culture, probably by a humid atmosphere. For a few years I have saved my own seed of various kinds, not from unhealthy plants, but from the first crop and of best shaped fruits. Some kinds are more subject to disease, especially the large varieties. I have never had a plant of Conference diseased, whilst whole crops of Chemin have failed. Perhaps Mr. Douglas does not grow many varieties, and he may have more favourable positions for his houses; he certainly is fortunate in his immunity from disease with these plants when so many suffer. GROWER

**Wintering Lettuces under walls.**—An old saw tells us not to put all our eggs in one basket, and its truth is very apparent in many ways just now. Lettuces that were planted in the autumn for the earliest crop close up to south walls have nearly all been killed, as the sun had thawed the snow from them before the severe frost was over. Plants left in the seed beds and others pricked out on the open borders at some distance from the walls have come through the winter without a loss, and are now being planted

by the thousand into open quarters, later on to be occupied by Celery, where they will soon grow and be cut for use in quick succession to others put in warmer positions. Early saladings will be scarce this year, and such plants ought to pay well for planting in quantity now. The variety which has stood the winter best is the old Bath Brown Cos, but Hammersmith Cabbage Lettuce will be ready for cutting earlier than any of the Cos varieties.—J. C. TALLACK.

**Veitch's Autumn Giant Cauliflower.**—By sowing a pinch of seed early in September, pricking the plants out into a frame when large enough to handle, keeping them stocky through the winter and planting out towards the end of March, I am able to cut nice heads of this Cauliflower at the end of July and throughout August. In no other way can this Cauliflower be had in good condition at that season.—E. M.

**Spawning Mushroom beds.**—Spawning is often, I think, unduly deferred. Many allow their beds to fall to 80° and even 70° before inserting the spawn; consequently after the operation the heat rapidly declines and the spawn remains inactive for a long period. The above figures are all very well where the beds are of more than ordinary depth, but where no more than a foot or 15 inches deep the spawn may safely be inserted at 90°, as there is little or no fear of any reaction in the heat. Spawed at this figure and well covered with dry oat straw, beds will often show Mushrooms at the end of a month and continue to yield over a longer period than those that are spawed at a much lower figure.—J. C.

## GARDEN FLORA.

### PLATE 1010.

#### VANDAS.

(WITH A COLOURED PLATE OF V. SUAVIS.\*)

It was on the introduction in 1847 of the well-known *V. suavis* and *V. tricolor* in one importation that the value of *Vandas* began to be apparent, and since then the genus has been constantly enriched. *Vandas*, except in a few instances, are easily managed. They include also some of the most stately habited of Asiatic Orchids, and this, combined with their handsome evergreen foliage, makes them attractive at every season of the year.

About thirty species are known, these being spread over a wide area in Tropical Asia; from the Himalayas they stretch southwards and eastwards through India and Burma to the islands of the Malayan Archipelago, one species even reaching Australia. They are always epiphytal, the leaves being mostly arranged in a distichous manner, and are usually strap-shaped, although in a few species they are nearly or quite terete.

In regard to the cultivation of these plants, it is impossible, especially in the matters of temperatures and moisture, to speak of them as a whole. The widely separate localities over which they are spread, and the peculiar climatal conditions which attend the growth of individual species, necessitate in several instances marked differences in the methods of cultivation. The majority of the species, however, especially those of dwarf growth, require identical conditions, and, except where stated otherwise, the following particulars as to treatment may be taken as applying to the whole of those here mentioned. They may be grown in pots, baskets or cylinders; for the dwarfier kinds the two last are preferable, pots being generally used for the stronger growers like

\* Drawn for THE GARDEN in the Royal Gardens, Kew, by J. Allen. Lithographed and printed by Guillaume Severynus.

*V. suavis* and *tricolor*. In whichever of these they may be planted the lower two-thirds of the space should be filled with drainage, the remainder with clean living Sphagnum. No species requires peat or any like material about the roots, but when large pots have to be used a few lumps of charcoal or porous brick may be mixed with the Sphagnum. Whilst *Vandas* may be termed stove plants they do not require such essentially tropical conditions as some Orchids, such as *Phalenopsis* do, and mistakes are more frequently made in giving too high a temperature than in the other direction. A winter temperature of 55° to 60° and a summer one of 65° to 80° will be found sufficiently high, the lower figures indicating the night temperatures. A point of great importance in the successful cultivation of all the species is that they should have the greatest possible amount of light, short of causing actual discoloration or damage to the foliage. It is found that by keeping the plants within a few inches of the glass and shading only when the sun's rays are most powerful, not only is the foliage harder and sturdier, but the flowering is more regular and profuse, and the blooms themselves of better colour. During the growing season an abundant supply of moisture at the roots is indispensable, and as a considerable proportion of these are usually outside the pot or basket, the necessity of maintaining a moisture laden atmosphere is forcibly suggested. In the matter of ventilation a regular supply of fresh air without permitting a cold current to pass over the plants should be aimed at. In winter the supply of moisture should be greatly reduced, but the Sphagnum should, nevertheless, be kept slightly moist at all times. As soon in spring as the tips of the roots show signs of renewed activity by pushing forth green points, the dead Sphagnum should be replaced by new, and the drainage put in good order. When the roots have attached themselves to the sides of the pots or baskets, care should be taken not to disturb them; the material which has to be replaced can generally be removed by the aid of a pointed stick and by syringing. For the same reason it is advisable, when more root room is desirable, to place the old pot with its roots attached inside a larger one.

*V. AMESIANA.*—This dwarf growing variety was introduced by Messrs. Low, of Clapton, from Upper Burma. The flowers are on tall erect spikes, the sepals and petals white, flushed with rose; the lip rich magenta-rose, with paler coloured margins. From twenty to fifty flowers have been borne on one spike, and as many as eighty have been counted on imported spikes. This species may be grown in an intermediate or even cool house.

*V. KIMBALLIANA.*—It is also to Messrs. Low that we owe the introduction of this *Vanda*. It comes from the same country as *V. Amesiana*, and is nearer to it in relationship than any other. It is undoubtedly one of the loveliest of the genus. It has leaves still narrower than those of *V. Amesiana* and almost terete. The flowers are between 2 inches and 3 inches in diameter, and from six to nine are borne on the spike. The sepals and petals are sometimes of a pure white, sometimes flushed with rose, a beautiful contrast being made by the rich rosy purple of the lip. It requires the same temperature as *V. Amesiana*.

*V. TERES* AND *V. HOOKERIANA.*—These two species are distinct from other *Vandas* on account of their terete foliage. As a garden plant, *V. teres* is the superior. It has dark green stems about the thickness of a goose-quill, and cylindrical leaves about 6 inches long. From three to six flowers are borne on the raceme, each of which is 3 inches across. The oblong sepals are white



tinged with rose, the large and more rounded petals being deep rose. The lip is very showy; in front it is of a rich rose veined with orange, but in the throat the latter forms the ground colour, and it is spotted and striped with crimson. It is a native of Burmah and Northern India. *V. Hookeriana* is easily distinguished from *V. teres* by its paler green, more pointed and smaller leaves. The racemes usually carry two flowers. The sepals are white, tinged with rose; the petals larger, more spatulate, and spotted with magenta. The lip is  $1\frac{1}{2}$  inches wide; in front it is of a purple-tinted white, spotted with magenta towards the edges, streaks of the same colour occurring in the centre. *V. teres* was introduced in 1828, but it was not until 1873 that *V. Hookeriana* was seen in English gardens. The cultivation of these two species is different in some respects from that of other Vandas. They require the greatest possible amount of sunshine to induce them to flower, and may be kept pretty well unshaded at all times. In summer the night temperature should not fall below 70°, and an abundance of moisture must be given. It has been found a good plan to set apart one light of a well-heated frame for them, planting pieces about a foot long in a bed of Sphagnum 4 inches deep, draining it well. In the growing season the frame may be shut up and syringed about 4 o'clock, putting on again before evening a crack of air. In winter they may be kept quite dry in a temperature of 55° to 60°. The essential points, therefore, in the cultivation of these two species, more especially of *V. teres*, are unrestricted light, a high degree of heat and moisture, and a thorough ripening off in autumn and winter.

*V. SUAVIS* AND *V. TRICOLOR*.—For general garden work there can be no doubt that these two species are the best of Vandas. In habit both are stately and handsome; they grow well with other plants, and they illustrate, moreover, a style of growth which is comparatively rare in plant houses. Reichenbach considered them to be varieties of one species. Out of flower they are indistinguishable, and in flower the chief distinguishing character is in the ground colour of the sepals and petals, which in *V. suavis* is white, whereas in *tricolor* it is yellow. They are both natives of Java. The commonest error in the cultivation of these two species is in giving them too high a temperature and too much shade. They are intermediate rather than stove plants, and a minimum winter temperature of 50° will suit them.

*V. CERULEA*.—This species blooms in late autumn, and at that season there is no Orchid which excels it in the wealth and beauty of its flowers. The spikes, two of which not unfrequently appear simultaneously on one plant, carry from ten to twenty flowers; the latter number, however, very rarely, and only on newly-imported plants or on those of extraordinary vigour. In the best varieties each flower is 4 inches in diameter, and the sepals and petals (which ought to slightly overlap each other) are of a lovely pale lavender-blue, tessellated with a darker shade. The lip is small, but of a yet deeper blue. It is a plant of erect habit, with two opposite rows of dark green rigid leaves each 6 inches to 8 inches long and strap-shaped. This species has acquired the reputation of being a difficult one to deal with, and no doubt with some justice.

*V. SANDERIANA*.—Whilst this species does not possess the charm and delicate colouring of *V. cerulea*, it is, on the other hand, the largest-flowered and showiest of Vandas. The flowers are each 5 inches across, and a dozen or more are produced on one spike. The upper sepal and petals are pale rosy lilac tinged with yellow and have also crimson dots at the base. The lower sepals are 2 inches in diameter, fawn-coloured and reticulated with brownish crimson. The lip is small and of a dull crimson. Notwithstanding their marked structural differences, the flowers strongly suggest those of *Odontoglossum vexillarium*. The species was introduced in 1881 from Mindanao, one of the Philippine Islands, and first

flowered in Mr. Lee's collection near Leatherhead.

*V. CATHARTI* is a tall-growing plant with slender, terete stems and pale green, narrowly oblong leaves 6 inches long. It is a handsome species, but does not flower freely as a rule. The flowers are upwards of 4 inches in diameter, with broad oblong sepals and petals, the ground colour of which is pale yellow, but marked with bars of reddish brown. The lip is white with a tinge of red on the side lobes, whilst the large central lobe has a yellow incurved margin. Sir Joseph Hooker discovered this species in the hot valleys of the Eastern Himalayas. It has been most successfully grown when trained on a damp wall, and differs from most Vandas in preferring a good deal of shade.

There are still to be mentioned a number of dwarf growing species, which form a beautiful and important section of the genus. *V. Bensoni* is a charming species with flowers 2 inches across, whose sepals and petals are marked with numerous red-brown dots on a yellowish ground, whilst the lip is of a soft violet. *V. cerulescens*, as the name implies, has flowers in which the prevailing tint is blue. They are over an inch across, the sepals and petals being pale purplish blue and the lip a rich violet-blue. This delightful plant should be in every collection, a remark which applies as strongly to *V. Denisoniana*, whose beautiful white flowers render it distinct from all other Vandas. The true *V. insignis* is not a common Orchid, what is generally known under the name being a totally different plant and a variety of *V. tricolor*; the true plant has tawny yellow sepals and petals, blotched with dark reddish brown, and a lip of a delicate rosy white. *V. Parishii* is distinct by reason of its handsome bright green leaves, which are oblong and unusually thick and firm. The outer segments of the flower are of a greenish yellow spotted with bright reddish brown, the lip being white, striped with orange at the base, but magenta in front. *V. Roxburghii* has pale green sepals and petals tessellated with olive-brown, the lip being violet-purple and white. In this and various other species of *Vanda* the outside of the sepals and petals is white.

W. J. B.

## THE WEEK'S WORK.

### KITCHEN GARDEN.

**BEANS IN FRAMES.**—A short time ago I advised the sowing of *Syon House* and *Ne Plus Ultra* French Beans in small pots with a view to transplanting them into frames during the month of April. If after growth commenced this batch was given a cooler temperature, they will be robust and hardy, with thick, dark, fleshy leaves, a condition absolutely necessary if good progress and full crops are to be secured in cool frame temperature. As a rule in fairly large establishments several frames recently occupied by Endive, Lettuce, Cauliflowers, and Cabbage will now be empty, and if the soil in which these have been growing is fairly rich and dry it need not be removed, but some fresh added to it, stirring in somewhat freely an approved fertiliser. Close the frames for a few days to thoroughly warm the compost through, after which plant in rows 18 inches apart, disturbing the balls as little as possible, and planting not too deeply, so as to avoid stem-rotting. If the soil is in a semi-moist condition, no water will be required for the present, beyond settling the compost about the roots. If the frames are kept rather close for ten days the plants will quickly become established, and with increased air and overhead syringing on fine afternoons at closing time growth will be strong and rapid. This early closing must not be overlooked, as the nights may be cold for some time to come,

and the difference between plants which have the benefit of husbanded sun heat and those which have it not will be apparent. If a frame or two in which *Asparagus* has been forced can be spared, it will pay to re-pot a portion of this batch into 9 inch pots, and plunge them in the partly exhausted bed of leaves on which the frame stands, if necessary adding a fresh lining of leaves and stable litter. The roots being confined in pots will induce a moderate growth and earlier cropping than will be case with those planted out in the unheated frames, these last forming a succession. Where the pits or frames are of sufficient depth to allow of it, Canadian Wonder may be grown in this way, using soil free from manure, as this Bean is so prone to rank growth if at all stimulated in the earlier stages. Coverings of double mats will, of course, be necessary every night for some time to come. In warm sheltered gardens the first-named varieties of the same age and height may be planted out on a south border, to be protected from frosts and wind by the erection of a rough framework, the same being covered at eventide by canvas or ordinary garden mats. On frosty mornings the covering must remain on till after breakfast. One great point in early outdoor culture is to work in amongst and around the roots a quantity of fine semi-dry soil. Do not sink the plants in trenches, as some do for protection, but rather place a few Yew boughs here and there on either side of the rows. Slugs often play havoc with this batch, a few of these pests unobserved ruining the whole lot in a few nights. The best plan is to sprinkle soot and lime thinly over the surface of the ground at planting time, renewing this after rain until the Beans grow out of harm's way. Sowing the seed in the open ground had better be deferred till the first week in May, and even then a very sunny site will be necessary, coupled with a warm, well-drained soil. Sow plenty of seed, as Beans are not in the best condition this season, and thinning to any extent can be practised if the plants should be too thick.

**SUCCESSIONAL TOMATOES.**—The present is a good time to sow seed for the production of plants to fruit in cooler houses either in boxes or pots, the growth being trained up the roof glass or in an upright manner to stout stakes. These will follow the second earliest lot now being grown on in an intermediate heat. The Old Red is still one of the best. Sensation, Jubilee, a good strain of Perfection, and Conqueror are useful. If weight of fruit to the individual plant is the main thing, Oxonian, a variety sent out last year, is worthy of cultivation, the fruit being simply enormous, and well adapted for cooking or for converting into sauce. Where small lunch-sized Tomatoes are in request, the old Trentham Fillbasket is a useful kind and a good bearer, and where the desire is to have a variety which, in addition to being a heavy and continuous cropper, is likewise fit for exhibition, I cannot name a better than Webb's Regina. One noted grower for market after growing it on a moderate scale last year decided to make that his sheet anchor in 1895, so good was it in every respect. Plants raised recently for outdoor work must be brought on under as cool conditions as possible, and subjected to all the fresh air and as dry an atmosphere as can be given; too much heat and a stuffy atmosphere will lay the plants open to attacks from the dreaded disease when they are exposed against open walls. Some of the very best results are obtained from plants in 10-inch pots, these being plunged in the border at the foot of the wall and well mulched to preserve the moisture. If half the plants is so treated and the remaining half planted in the ordinary manner, a supply over a longer period will be secured, as those in the pots will ripen a fortnight sooner than the planted out ones. It must, however, be borne in mind that, owing to their confined condition and a multiplicity of roots, a good amount of nourishment will be indispensable.

**MAIN-CROP BEET.**—From the present time to the end of the month is a good time to sow Beet for the principal winter supply. I know that some advocate sowing in May, but should the

summer turn out wet and cold or excessively dry, the roots often do not attain to much more than half their normal size, as practical men do not care to sow Beet on richly manured land. A good deal depends on the variety, as some sorts, although catalogued as medium-sized and even small, will, even on unmanured land if it is in fairly good heart, grow coarse and woolly in spite of late sowings and little thinning. For my own part I prefer Veitch's Selected Red as an all-round table Beet, it being of medium size and very rich colour, and quite free from white rings, so noticeable in some Beets; its flavour also is irreproachable. Nutting's Dwarf Red is a capital old Beet, Dell's being hard to beat where an extra dark-fleshed variety is wanted. A lightish soil, free from stones and of fair depth, and that has been cropped since manure was dug in, is what is wanted. Moderation also in thinning out the young plants is necessary, as if too much space is left between them any kind will grow to an ungainly size.

**PARSLEY.**—The end of April is a good time to sow for the principal winter supply. One or more batches should occupy ground that can be conveniently covered with frames as soon as bad weather comes on in November or December. From this sowing also transplantings may be made for the purpose of lifting in autumn and placing in frames or pits for winter pickings. In this case plenty of room must be allowed between each plant in order that lifting may be made easy and a ball of soil be secured. I generally sow in July for early spring use, protecting the young plants during winter with a frame. This lot springs into new growth in February or March, and soon gives a good supply. The ground should always be specially prepared for Parsley by the admixture of plenty of insect-proof ingredients, such as soot, gas-lime, and wood ashes. This is a good mixture for banishing wireworm, the chief enemy to Parsley roots.

**POTATOES IN POTS.**—Where these are grown for a few early dishes the haulm will now be assuming a yellowish cast. The tubers also will be of fair size. Less water and increased volumes of fresh air will likewise be needed to impart flavour and prevent them from eating watery. Later lots must be well nourished.

**SEAKALE.**—Where the produce from beds forced by means of pots and leaves has been cut, means must now be taken to gradually harden off the stools previous to complete exposure. The lids of the pots should be removed each morning, and replaced again at eventide. After this treatment for a fortnight the pots may be removed and the crowns just covered with a few leaves, this being taken off after a similar period.

**PLANTING SEAKALE.**—A fortnight ago I advised planting a portion of the more forward root cuttings in a sunny aspect for supplying crowns for early November forcing. The main lot may now be planted, as this will have a longer rest after shedding its leaves in autumn before being placed in heat. More manure may be dug in than is advisable with the earlier lot above referred to. Plenty of space also is essential both between the rows and from plant to plant. From those that are well sprouted remove all but three, and draw a little soil over them to protect the tender growth from frost. Frequently slugs and other pests are troublesome, eating off the young leaves as they begin to develop. Sparrows also and wood pigeons often attack them, hence the need for occasional sprinklings of soot and wood ashes. Malt dust is a capital manure for Seakale. It may be dug in at the start, and likewise applied in the form of a top dressing after growth has advanced somewhat. The rains will then wash in its virtues.

**PRICKING OUT.**—There will now be a considerable amount of this work amongst seedlings of various early vegetables. Early Celery, Lettuce, Cabbages, and Cauliflowers must not be neglected in this respect, or no amount of after attention will atone for it. See also that the boxes containing such things are removed from the germinating quarters to cooler ones in due time, as if once the seedlings are allowed to become leggy and fall

about, they seldom take kindly to the soil when pricked off. In a cooler position they come on slowly but surely, and can then be attended to from time to time.

**HOING AND CLEANING.**—A good deal of this will now be needed amongst the earlier green crops, as ill weeds grow apace. Spring Cabbages and Spinach are much benefited by frequent surface stirring to remove small weeds and admit air. After hoeing, a little soil should be drawn up to the plants of the former. Onions will require hand-weeding, firming, and a broadcast stimulant, using the thick-necked ones for present kitchen use. Ground should now be got in readiness for the earliest Leeks. They may be grown either in trenches or on the level; if the latter, holes should be made with a dibber some 9 inches in depth, and the young plants dropped down to the bottom, a little soil afterwards being forced in to cover the roots. Plenty of rich food is necessary for this crop, as the larger they grow the better.

**HERBS.**—The more tender sorts of those sown some time since in heat will now be fit for hardening off, and in a fortnight's time may be transplanted, giving them some fine soil to start in. Seeds also of all the more hardy robust herbs may now be sown in the open border. J. CRAWFORD.

### FRUIT HOUSES.

**BANANAS.**—Those who grow Bananas will now find it advantageous to feed liberally plants that have thrown up fruits and to top-dress with short manure. Musa Cavendishi is the best variety for most growers, owing to its dwarf habit, and though thought inferior, the fruits are greatly superior to those imported. Many can grow a few plants in large pots or tubs who cannot devote a house to their culture, and frequently plants grown in this way are more profitable, as when a house is devoted to them they are, like Negro Largo Figs with a large root area, prone to much leaf growth and few fruits, whereas with restricted root growth they can be better managed. Large plants that have not fruited should not be allowed to produce suckers too freely. Any plants large enough to fruit should be kept on the dry side till the flowers show, when more moisture and rich food in the way of liquid manure should be given, top-dressing with some artificial manure. A high temperature with ample moisture in all parts of the house is necessary. Fruiting plants should have a heat of 70° at night with 10° higher by day, though excellent fruits may be cut from M. Cavendishi grown in a temperature 10° lower than the average given, allowing it to run up freely at closing time. Plants that are grown slowly at times are longer in pushing up their fruit, and if stationary too long the fruits decay in the stem, so that it is advisable to supply more warmth at this season.

**SUCCESSION PLANTS.**—Suckers taken from fruiting plants now if strong and potted on will make fruiting plants for next spring. I prefer suckers taken in April or May, as they winter better, do well in a low temperature, and show fruits in about twelve months from time of potting. Earlier suckers are apt to show in the autumn, and they do not thrive so well, making a poor growth. In some cases there is a difficulty in getting the fruit free of the leaves. The compost should be good rough, turfy loam, with some decayed manure and small bones or bone meal, potting firmly and shading for a short time. Short, sturdy suckers are preferable to large pieces with drawn leaves. If extra strong suckers can be obtained and planted at once, it is important that they get good drainage, rich soil, and plenty of warmth from the start. Kept in a dry hot-house, the foliage soon gets infested with red spider and thrips. Smoking occasionally is necessary, and in syringing it is well to lightly damp overhead, as the deep midrib conveys the water into the heart of the plant in greater quantities than is desirable. If planted out in beds, it is well to restrict root space not so much in width as depth. If planted too deeply, the plants in dark houses or mixed with other plants decay at the

collar and fall just before the fruit forms. It is always well to renew the border after fruiting, as the soil is impoverished, giving new drainage before replanting.

**STRAWBERRIES IN POTS.**—The earlier fruits will now be at the ripening stage, and need care to obtain flavour. Too much water in dull, sunless weather will cause poor flavour, and if the plants are in strong heat in a moist house the flavour will be second-rate. Objection is taken to forced Strawberries by many owing to the lack of flavour, but to a certain extent this may be avoided from this date. With earlier crops it is more difficult, as there is not time to get flavour by adopting cooler treatment. Those who force in quantity and are able to devote whole houses to the plants will be in a position to lower the temperature and keep the house drier. Much can be done by careful removal to a small pit or house where the plants may be given more air, and thus obtain the brisk acid taste so desirable. Manures are often given too late, and thus affect flavour. I feel sure many plants would be much benefited by giving manure just as the flower-spike is pushing up, not waiting till the fruits are formed. Strawberries fruiting in vineries should be removed as early as possible, as the plants are so subject to red spider and mildew.

**SUCCESSION CROPS** will now come so freely, that there is no fear as to their cropping qualities if specially grown for forcing. Thinning should be done early as the plants soon feel the strain of a heavy set. Thinning should be done according to the size of fruit. Such a large kind as Auguste Nicaise, a very fine mid-season variety, requires more thinning than Keens' Seedling, six fruits being ample, whereas eight to ten may be left on others of less size. For fruiting in May I always depend on President, one of our very best forcing varieties. Its chief fault is that it mildews badly, and if not grown against the glass the foliage gets much drawn. To follow this Sir C. Napier is always good, the fruits firm, solid, and of grand colour. To get these varieties good it is well to force slowly from the start. There is often a difficult period to bridge over by those who force Strawberries—that is the end of May, as in many gardens the forced plants are over, and those in the open not nearly ripe. In such seasons as 1893 the outside crop was ready by the end of May, but it rarely happens we have such favourable weather. The plants in the open this season have been much cut by severe frosts, so will be late. I find it a good plan to place a few hundred plants in cold frames about the end of April, these providing a supply at the time named. I do not advise growing on shelves or stages, but on a cool ash bottom. Grown thus, there is less watering, insect pests are few, and the flavour is equal to that of outdoor plants. Of course grown thus it is necessary to stake all the flower trusses and to grow near the light. Frames that have wintered plants may be made good use of. Many shifts have to be made at times to obtain a late supply for frames. Treated as advised, it is not necessary to keep the pot plants. Should there be a scarcity I have found that young plants lifted with a ball do well, and though they must be well thinned, good-sized fruits are obtained. The much-abused Noble does well given cold frame treatment and the flavour is very fair. Those who require late Strawberries after the permanent beds are over would do well to harden their forced plants of Vicomtesse and La Grosse Suerée. These planted out in richly-manured land will furnish a good autumn crop.

**CHERRIES** under glass will need more attention just now than at any other period whilst being forced. The Cherry being so subject to the attacks of aphides, frequent fumigation is necessary, doing the work twice or thrice in succession, and choosing a quiet time for the work. Trees grown in cases will need a liberal supply of moisture, and as soon as a good set is secured the syringe should be used freely to keep red spider at a distance and promote a free growth. The damping overhead having been discontinued during the flowering period must be resumed as

soon as a good set is secured. The trees also will require water, and as the fruits swell warm liquid manure should be given. The temperature now may range from 60° to 65° by day with 10° lower at night. Air freely during bright sunshine, and do not attempt any thinning of the fruit till the growth is somewhat advanced.

**PEACHES IN CASES.**—Late trees in cases or those merely given glass protection will now be flowering freely. Plenty of air should be given during the day, and there should be no lack of buds on well-managed trees. In many cases the flowers will be so thickly packed that it will benefit the trees to remove badly placed flowers, thus giving the more prominent ones room to expand freely. Fertilising the flowers in light airy cases will not now be necessary; bees will do the work much better. As regards thinning, my remarks apply to vigorous trees and those overdone with bloom. Fumigating must be well attended to, and it is necessary to do the work as soon as the fruits have set, as green or black fly soon cripples the young shoots, and once the leaves get into a curled state the fly is more difficult to get rid of, the leaf protecting the enemy. Watering will be necessary, and it is well to use water of the same temperature as the house. Water thoroughly and disbud as soon as the shoots are on the move, doing a portion of each tree daily.

G. WITHERS.

## ORCHARD AND FRUIT GARDEN.

### HARDY FRUIT CULTURE.

IN face of the magnificent fruit prospects no doubt many will be watching the weather with more than ordinary interest for the next few weeks, especially those whose livelihood depends in a great measure on the crops. So far the weather has been in the grower's favour, as trees are much later than last year. At this date (April 6) last spring all our Plum trees were in full bloom, but even with warm weather the flowers will not expand under another fortnight this season, all of which makes spring frost less dangerous. However, though we have an advantage in that respect, the severe winter and late spring do not appear to have acted as a check on the hatching of insect eggs, as I found to-day the larvae of the winter moth just hatched on Plum, Apple, and Pear trees in quantity, and have commenced spraying with 1 oz. of Paris green to every 20 gallons of water. On Apple trees aphides are appearing, and no time should be lost in dealing with this pest while in its infancy. Whatever insecticide is employed for its destruction, I would strongly suggest applying it warm, as it is more effectual. Red spider is alive on many Gooseberry bushes, and it will be a good plan to spray them with a suitable remedy early, taking care to force the liquid to the underside of the foliage. In Raspberry plantations the Raspberry-bud caterpillar (*Lampronia rubiella*) is just commencing to appear, the buds failing to grow or drooping. If these buds are taken off, a small red grub will be found in each. Hand-picking is the best and most efficacious remedy at this season. A whole host of injurious insects could be named that the fruit grower has to fight against if he means to make his calling a success, and I believe insect destruction is one of the most important items in hardy fruit culture. If we could give the same amount of care and attention to fruit trees outside as given to those under glass, what splendid results would be obtained. Unfortunately, it is practically impossible to do so in the great majority of gardens, as the labour is totally inadequate to attempt anything of this sort without neglecting other work that must have attention if the

ordinary supply of vegetables, flowers, &c., is to be kept going. In some few gardens, both large and small, sufficient labour is provided for all requirements that may arise, and in such instances I would suggest bestowing extra care and attention on a few trees of different kinds, disbudbing them just the same as if grown under glass, stopping all shoots that appear unduly strong, syringing them once or twice daily, according to the state of the weather, and liberally thinning out the fruit when it is fairly set; also supplying sufficient manure for the full development of growth and fruit. By giving the trees of any sort such good culture, fruit will be produced of magnificent proportions and remarkably fine in colour and flavour, as proved by actual experience when I had more time to attend to these details. In growing for market I question if it would pay to bestow so much attention on the trees, as the labour bill would be heavy in a large plantation; still I should not like to state that it would be unprofitable, as I have sold Warner's King wholesale at 2s. 6d. per dozen fruits from trees treated as mentioned above. But the private grower is differently placed to the market man, as he does not grow for profit, but for his own use and pleasure, and expense of production is a secondary matter. When this is the case, I think nothing gives more pleasure or interest to the owner than to see his fruit daily developing into specimens infinitely superior to anything of the kind he can see elsewhere. Not only so, but the grower of such fruit confers a benefit on the neighbourhood, as he shows in a practical manner what can be done in fruit growing by giving the trees high culture, and he may be perfectly sure that others will be stirred up to follow his good example. We hear a great deal about over-production, low prices, bad prospects for all connected with the land and its cultivation, but in spite of such pessimistic views there is still money to be made by fruit growing if conducted on proper lines.

W. G. C.

### GRAPES FAILING TO SET.

IN reading the remarks on this subject at page 193 I observe that "W. G. C." had a good set of Muscats with the temperature at night as low as 45°. The question of low versus high temperatures for Muscats or indeed any varieties of Grapes has often been discussed, and as far as the evidence has been forthcoming from the best sources, it has told in favour of the higher temperatures. It will be observed that in the case alluded to the days were bright and favourable. If the weather had been bad with little or no sun-shine, the low night temperature might have been disastrous. I quite agree with "W. G. C." as to the importance of having the roots in good condition; that is of primary importance, but it is not everything. Our house of early Vines was in flower as early as February this year, and I greatly fear if we had been obliged to have the temperature so low as 45° as a minimum, that two varieties of Grapes would have failed to set. These are Madresfield Court Black Muscat and Venn's Muscat, which is presumably merely Snow's Muscat or the still older Black Muscat of Alexandria. The Buckland Sweetwater and Black Hamburg are both free-setting varieties, but even with these I would be afraid to trust their setting in such an exceptionally low temperature. I kept the minimum temperature well up to 65°, but there was not much rise above this by day; probably 70° would be the average day temperature. The atmospheric conditions have to be considered. A dryish atmosphere is best, and once every day, about noon or soon after, the bunches are gently shaken, and the pollen is conveyed from the Black Hamburg variety to any others that are known to be shy setters. My plan is to tie a

rabbit's tail to a stiek and draw it over the bunches of the Black Hamburg. It comes off them laden with pollen, and we merely touch the bunches of say Snow's Muscat and Madresfield Court Muscat with the fur of the rabbit. In some cases a small globule of moisture is attached to the stigmatic part of the flowers, and unless this globule is dispersed, the pollen cannot touch the stigma. The best way, or at least a good way, to remove it is to draw the hand over the bunches and also give them a gentle shake. Of course, the condition of the Vines at the time of setting has a good deal to do with success or partial failure. My plan is to give the Vines a thorough watering when the house is started, and another good supply is given when the bunches begin to open out, say a week previous to flowering. This second watering will carry the Vines into the stoning period, when they may again be watered. How much water should we apply to the Vines at one time? is a question frequently asked, just as people ask, "How often shall I water my Pelargoniums, Fuchsias, &c.?" In the case of the Vine border the question is more easily answered. I give a border about 12 feet wide and 30 feet long about 300 gallons of water, and at the time that I was a frequent exhibitor of Grapes at the metropolitan and other flower shows in May and June I used to heat a copper of water, and as the water was being applied to the Grape Vines enough warm water was added to heat it to a temperature of between 90° and 100°. I have won first prizes with Muscats in the last week in May, and I remember growing twelve bunches of Buckland Sweetwater on one rod, and every one of them was exhibited and all won first prizes. This variety was planted at the end of the earlyinery, and close to the wall on the other side was a large boiler which heated theinery in question and three other hothouses, so that the furnace was seldom out summer or winter. The berries on these bunches were quite of a golden colour. This is evidence that the artificial heating of Vine borders is sometimes productive of good. It may be harmful if care is not taken to apply much larger quantities of water to the artificially heated border. As bearing upon the setting of the fruit, I found that there was no trouble with the Buckland Sweetwater near the heated part of the border, but a plant near the other end of the house would have badly stoned berries sometimes. A dryish atmosphere is essential to a good set of Grapes.

J. DOUGLAS.

**Planting young Apple trees amongst old ones.**—How often even now do we see this error committed, although not one single point can be advanced in its favour. In the first place the root-run is generally impoverished by the older occupants of the orchard, while their branches produce such a dense shade that any young trees planted in the intermediate spaces stand no chance whatever of receiving light, air, or sun. Usually this kind of planting is carried out when the old trees show signs of exhaustion and decay. This being so, the better way would be to sacrifice one-half of the old trees, trench and enrich the soil by liberal additions of loam and manure, and plant the young trees. The other half might be retained till these come into bearing, when it could likewise be renewed and replanted. At any rate, planting young trees amongst old ones is a most unpractical and unprofitable proceeding.—J. C.

**A letter from Russia.**—I have the pleasure of sending you some scions of a species of Cherry which is grown on its own roots and which is propagated and multiplied by means of its suckers. It is unquestionably the best kind of Griotte Cherry, and in the north of Russia, in the government of Vladimir, and especially at Viazniki, there are very extensive plantations of this species alone. The fruit is fair-sized and red skinned and the juice of it stains deeply. When quite ripe the flesh is sugary and pleasantly acidulous, in fact very agreeable to the taste. From it are made preserves and very delicious liqueurs, and it

is also eaten fresh from the tree, or dried, &c. The tree grows to a medium height, is very hardy, remarkably productive, and very constantly so. When a tree appears to be worn out it is cut down close to the ground, and of the numerous shoots which are emitted from the stump one of the strongest is selected and retained, to be trained and grown as a bush or half standard. The Cherry tree in question has many synonyms, the commonest of which are Cerise Vladimirskaia, C. Viaznikovskaia, and C. Roditelera.—LEON SIMIRENKO.

**Liquid manure for fruit trees during winter.**—Few persons appear to realise the benefit that fruit trees derive from having their roots thoroughly soaked during the winter with liquid manure. Too much of this is allowed to run to waste where there is a tank in connection with the cowhouse or stable. Much good would be done to all fruit trees over ten years planted by soaking the ground well with liquid manure, choosing a fairly dry time in February, March, or even April. Apple trees cannot be renovated more quickly or cheaply than by supplies of liquid manure. From 50 to 100 gallons is not too much to give to a tree that has been planted for say fifteen years.—E. M.

#### EARLY PEARS.

THE early Pears that ripen in August are not very largely grown. They are soon past their best, and at that time many other delightful fruits are in season. If gathered and eaten at the right moment, however, these early Pears are delicious and refreshing. Their season may be extended by gathering them at intervals, and if stored a few days in a cool fruit room their flavour is considerably improved, provided, of course, that gathering takes place a little in advance of ripening.

**CITRON DES CARMES** is a well-known early variety, bearing abundant clusters of fruit after the manner shown in the illustration here given. In most seasons it bears freely, and succeeds either as a pyramid or a standard. The fruit when ripe is yellowish green in colour, and in forward seasons may be gathered about the third week in July.

**DOYENNE D'ETE** is the earliest summer Pear, ripening a few days in advance of the preceding. It is of delicious quality if eaten at the proper stage, but to secure it at its best the fruits must be gathered in advance of their ripening. If allowed to hang upon the tree till quite ripe the quality greatly deteriorates. The fruits are smaller than those of Citron des Carmes, but more yellow when ripe. It bears freely either in standard or pyramid form.

**JARGONELLE** is a popular early variety of much larger size. Its flesh is sweet, melting, and very juicy, the quality truly delicious. It is unsuitable for small gardens, not fruiting well as a pyramid, but in the standard form or trained on buildings with abundance of room for its spreading branches it is decidedly the best early Pear grown.

#### Forced Strawberry plants and exposure.

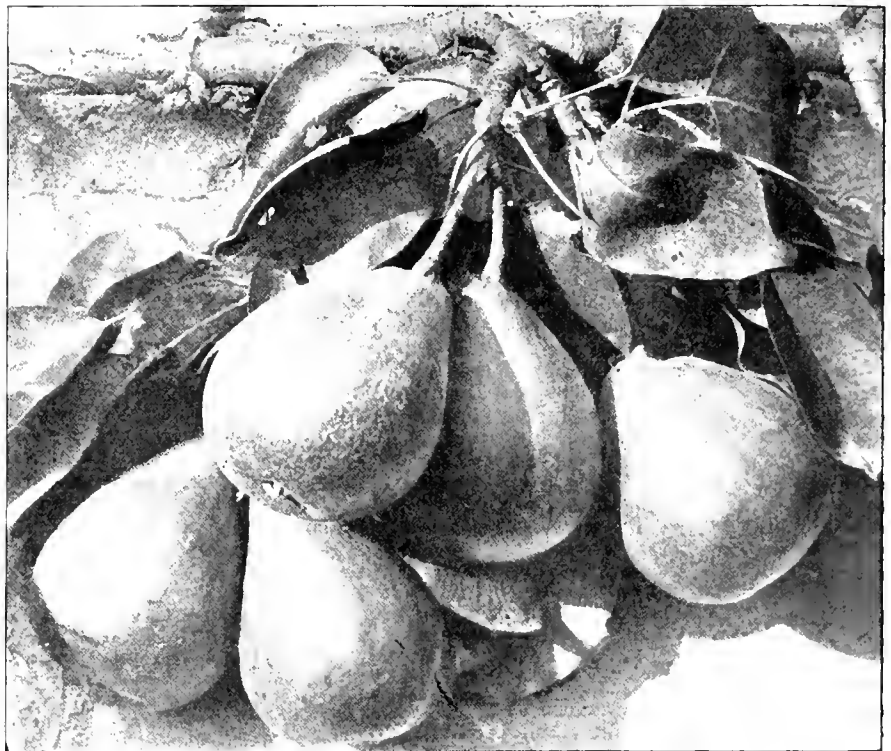
—It is often stated that, provided forced Strawberries are not exposed at the roots, they do not take any harm. But I am inclined to think we may carry this advice too far. This season a lot of plants for forcing protected with ashes did not break nearly so strongly as I could wish; the spikes were short and scarcely out of the foliage, whereas the same variety placed in fruit houses and not given much heat, only to keep out frost, was all one could desire. Again, we often see a very low temperature advised for young plants, but much depends upon when it is given. I had a lot of plants just showing their bloom in the centre of the plant, and through the breakdown of a boiler many have failed to fruit freely, though the temperature they were in never went

lower than 40°. Till this season I was under the impression Strawberry plants were not so particular as to exposure. Doubtless these, like many others, do not like extremes: and with regard to the first failure, when one can house the plants in cold fruit houses and keep well supplied with moisture, one is more independent, as he can get at them at any time. Failing houses, cold frames with ample protecting material are useful.—FORCER.

#### UNHEALTHY PEACH TREES.

OCCASIONALLY the most skilful Peach growers are troubled with trees that suddenly become unhealthy, the foliage assuming a pale green or yellowish colour, the growth weakly and followed by the fruit falling wholesale. What makes the mystery greater is the fact that other trees in the same house, or, if outside, on the

choking up the pores of the foliage after several applications. When this was discovered the tree was vigorously washed morning and evening with chilled water, and a dressing of muriate of potash given at the rate of 2 ozs. to each square yard of border as far as it was thought the roots extended. The result of this treatment was a rapid improvement in the health of the tree, and before the end of the season it was as vigorous as any other on the place and is now a mass of bloom. Sulphate of iron at the rate of a quarter of an ounce to the square yard has a very good effect in bringing a healthy hue to the trees on some soils, but is utterly useless here on our light soil. Muriate of potash answers better than any other remedy that I have tried. Another enemy to Peach and Nectarine trees is "blister," which usually attacks the foliage early in the season. A low temperature and cold winds are considered the principal cause of this dis-



*Pear Citron des Carmes. From a photograph sent by Mr. McWalter, Armagh.*

same wall, are perfectly healthy and everything that the cultivator could wish. Several probable causes have been mentioned from time to time that are likely to produce such an effect on the trees, but I think nothing really definite is known. One cause I believe is the roots taking up some element from the soil which, passing into the sap, cannot be assimilated, thereby injuriously affecting the growth. It is also a fact that such trees are the first to become infested by insect pests and the efforts to cull the enemies often produce a still further bad effect on the trees. As a case in point, last year I had a large tree outside of Hale's Early Peach the foliage of which began to lose colour, and directly this occurred aphids became very troublesome. A new insecticide that was highly recommended was freely used to eradicate the foe, but I believe if I had employed more clear water and less insecticide the tree would have recovered sooner, as many of the leaves fell through the oil or other substance in the insecticide

figurement to the trees, but I think there are other causes, such as the fungus remaining dormant on the trees for months, and again becoming active in the spring when fresh growth is made. In proof of this, we see trees lifted from outside walls and taken indoors become more or less blistered for a year or two. Some trees that I brought indoors last autumn have this spring had a few leaves on each affected. This was not caused by a low or fluctuating temperature. Probably the old remedy of picking off all the infested leaves and cutting away any malformed shoots as soon as detected is still the best, also spraying the trees thoroughly with an insecticide that is known to destroy fungoid attacks. Sulphide of potassium has always acted admirably with me for checking the spread of blister, mildew or any fungoid enemy on Peach trees. Half an ounce dissolved in 1 gallon of warm water is quite strong enough for the worst cases. After using this preparation for nine years I can strongly recommend it, but I

should state that under glass care should be exercised that none of the liquid falls on the paint or woodwork, thereby staining and disfiguring it. In addition to natural manures, I may advise an application of superphosphate at the rate of 2 ozs. to the square yard for either inside or outside trees, giving a dressing now and again as soon as the fruit has been gathered. This will do good on any soil, and materially benefit the trees and their produce.

W. G. C.

#### GROS COLMAN GRAPES.

UNDER the best cultural management, on a suitable soil, and every advantage that may be deemed desirable to grow this Grape well, it cannot be termed a variety of rich flavour, and on some soils and under conditions that other varieties like, Gros Colman is of a very objectionable quality, the disagreeable Ivy flavour being very pronounced—so much in fact, that it has been rejected by gentlemen as being unfit for their dessert tables. There can be no question that soil exercises a wonderful effect on this variety, that which is light, porous, and of a sandy warm character being the best adapted to its requirements. On the soil of the description mentioned I find it succeeds splendidly, and many experts have stated they never tasted the variety so free from the Ivy taint, and I could mention other places where the soil is similar having the same effect, particularly Mr. Child's, of Croome Court Gardens, Worcester-shire. For many years I have seen his exhibits at Cheltenham and other shows, and although the bunches were never large, the size of berry and high finish I have never seen surpassed, not even by Mr. Taylor, Alderman Chaffin's talented gardener, at Bath, who always grows this Grape in grand form, and whose soil is of the character named. On the other hand, I have not seen this Grape in perfect form when grown on a close, heavy soil; it may be that mortar rubble, sand, or other materials have been employed to render the compost suitable, the result has, so far as I have seen, been disappointing. The crop and size of bunch and berry may have left nothing to be desired, but the colour has always been more or less foxy and the flavour far from pleasant, in spite of cultural skill second to none. Opinions probably will never agree as to colour and quality going together, but although many say that a red berry is of quite as good a flavour as a deep black one, I think those who make the assertion would hesitate about doing so when referring to Gros Colman. Every year I have a few bunches at one end of theinery devoted to this variety that fail to finish up well, and which would furnish cause for complaint if sent to my employer's table, or if sold to the fruiterers who purchase our surplus Grapes. And a further proof of the value of a high finish is given by the fact of the annually increased demand for such Grapes in spite of increased competition and falling prices. To get this Grape in the best possible order and of superior flavour the Vines should be started at the latest early in March, as unless the colouring process is completed by the end of September it is very doubtful if they will finish properly unless October is a particularly bright and sunny month. In our uncertain climate it would be folly to start the Vines late on the expectation of a fine October giving the desired colour, it being just as likely to prove unfavourable as otherwise. On the question of temperature a good deal of difference of opinion exists, some advocating a warm, or, say, Muscat heat, and others a cooler temperature that would be suitable for Black Hamburgs or Alicante. My practice is on the later system, as obligation is no choice; the Gros Colman house being the lowest and least supplied with piping, a high temperature would be impossible, but even if plenty of heat were available I should not maintain a Muscat heat, a perfect finish being obtained without it, and this also means less expense in firing. It should be understood that while not recommending a high tempe-

rature fire-heat could be dispensed with in hot weather: on the contrary, I think it a great mistake to allow the fires to be out for days or weeks, depending entirely upon natural heat. There can be no doubt that a gentle heat in the pipes morning and evening is of material service by keeping the atmosphere sweet and pleasant to the Vines, also preventing great fluctuations of temperature, which cause mildew, checks, and other evils. Very often cases may be seen where a false economy has been made in trying to save expense in fuel, finding when too late that the extra cost of fuel would have been money well spent. Manuring is another matter of more than ordinary importance, which can only be settled by a close attention to soil, subsoil, and a knowledge of the constituents that are present or absent in the soil. If the grower on a heavy soil were to feed his Gros Colman or other Grapes in the same manner as another one that has to deal with a very light one, the chances are that he would kill his Vines with kindness. On our soil I apply stimulants in a weak form every time the borders are watered both summer and winter, but such a system would prove injurious on heavy and badly drained borders.

G. C. R.

## BOOKS.

### FERN GROWING.\*

FIFTY-THREE years of diligent research, as stated in the preface, have led the author to come to the conclusion that the great problem of Fern hybridising had at last been clearly and definitely solved by himself and by several of his pupils, some of whom, unfortunately, are no more. Unless one deliberately closes his eyes to the facts published in connection with British Ferns, it is difficult in the presence of the numerous instances stated by the veteran Fern grower, to whom we are indebted for the production of so many beautiful forms, to remain incredulous on the subject any longer, for the experiments of which the records are published leave very little doubt as to the success of the operation repeated by him times without number. Mr. E. J. Lowe states (p. 73) "that altogether more than nine hundred experimental sowings of spores have been made in forty years," so that his conclusions have not been drawn in any way hastily.

If we take into consideration the comparatively short space of time that has elapsed since the discovery of the reproductive organs in Ferns by a German botanist in 1834, it will be seen that the work done by the author of "Fern Growing" is exceptionally interesting, for, not satisfied with the publication of the results of his simple crossings of varieties or even of species, he also largely dwells on the possibility, nay, on the to him undoubted real effects produced by multiple crossing. This theory consists in the impregnation of several cells of one prothallus by the sperm of three, four or even six varieties, and as an example he gives, at page 64, the results of experiments having produced in some instances plants with two kinds of fronds in which the characters of the six parents were distinctly shown.

The experiments conducted by him with such signal success appear to be conclusive, yet they do not agree with similar ones carefully undertaken by me ten years ago under the guidance of Col. Jones, who narrowly for three years watched the results of the operation. This consisted in the sowing under his directions of four species and one variety of North American and British *Osmundas*, and the result was thousands of seedlings, all of which when fully developed represented one of the five plants sown, but though they were planted out and grown for three consecutive years, there was not the slightest variation observed among them. Yet, at p. 65, the

author, speaking of a series of experiments in which four parents had been used, states that "In these experiments no single individual was like any one of the varieties that had been sown together." The experiment has since been repeated by me, and has been, as before, attended with negative results. These two experiments, and others equally fruitless, having been worked on hardy exotic Ferns do not, however, affect Mr. Lowe's work, as I have had other opportunities of testing the efficacy of the theory of simple crossing, as stated in Lowe's "Fern Growing."

A very interesting operation and mode of propagation known as the sectioning or dividing of the prothalli into several parts as a means of increasing the seedlings is well described in this remarkable work; the same operation had already been successfully performed when a note of it appeared in THE GARDEN of February 27, 1886, p. 192, but this was in connection with the raising of *Todeas* only. Although dealing exclusively with native species and varieties, "Fern Growing" is unquestionably a work of great merit, full of established facts, clearly related, of useful hints as to cultivation, propagation and hybridisation, and should be in the hands of all who take any interest in that beautiful class of plants. It is a most valuable addition to "Our Native Ferns," "British and Exotic Ferns," &c., by the same author, as the reading is clear, concise, and well calculated to guide, encourage, and emulate Fern growers in their endeavours to produce new forms of British Ferns. The illustrations of many of the hybrids raised by the author of "Fern Growing" are numerous, and the whole work reflects the greatest credit upon author and publisher alike, and it is sincerely hoped that it will receive at the hands of the public the attention which it really deserves.

G. S.

### WAYSIDE IRELAND.\*

"WAYSIDE IRELAND" is the narrative of a trip from Cork through Connemara, Achill Island, &c. The author is not one of those who go from Dan to Beersheba and say that "all is barren." He is determined to be pleased, and he shows a keen sense of humour in recounting all that he sees. He chats with parsons, priests, peasants, "Removables," and in the facial lines of these last, be it said, he discovers a marked resemblance to the humble "bog-trotter" of the soil. At Kilkee from the railway-carriage window he notes "great huge blocks of Flag Iris and the Potato gardens blue with wild Scabious" and *Aster maritimus* quite at home, "one sheet of magenta." Cut, dried, and sold by the gross in bunches for decorative purposes, the French and Germans, he thinks, would make money by it. Barren Hill abounds in wild plants of great beauty; Ferns of all sorts and a blue *Campanula* in sheets of colour. Corkscrew Hill, too, is a "perfect paradise of wild gardening," and when you get down into the valley at the Ballyvaughan side, the entire aspect becomes so like the hills in the Holy Land, the plains where poor Jacob guarded his flock and had his vision of visions. Here *Fuchsia Riccartoni* is seen in full bloom, and "Hydrangeas quite blue from the iron in the soil. Dahlias live out all winter and become huge bushes of bloom." There are good oysters too. On Achill he saw *Parnassia palustris*, *Pinguicula*, quantities of *Sedum* and *Saxifrage*. The climate of Achill Island is so mild, that Dahlias live out all the winter at Dugort, the most northern portion, and so do *Fuchsia Riccartoni*, *Veronica*, *Escallonia macrantha*, &c. The book contains sixty-five pages of readable matter, and should have a wide circulation if only that it may perhaps induce the searcher after natural beauty to visit a portion of the Queen's dominions which has hitherto been much neglected by tourists.

\* "Fern Growing." By E. J. Lowe, F.R.S., F.L.S. John C. Nimmo, 14, King William Street, Strand.

\* "Wayside Ireland." By W. Baylor Hartland. Second edition. Illustrated. Parcell and Co., Patrick Street, Cork.

## STOVE AND GREENHOUSE.

## THE FRAGILE HAREBELL.

(CAMPANULA FRAGILIS.)

THIS is one of the most charming of all the dwarf-growing members of the Bellflower family, of which there are several others some of which may possibly be hardier than that now under notice. This Harebell is seen to far better advantage as a basket plant or for brackets above the line of sight than for growing in lower positions. I have grown it with the best results for the latter purpose when having to fill brackets outstanding from a wall covered with glass overhead, but with open sides, a groundwork of climbers covering the wall itself. In its season it was here a most effective feature. It also serves a good purpose when used in quantity as marginal lines to large basket arrangements or the stages of conservatories, whereby the pots of other plants are conveniently hidden. As a window plant it is grown extensively in some parts of the country, finding equal favour with the humble cottager, the well-to-do artisan, and those of high degree. I recollect very well being shown on one occasion some plants of this Harebell by the gardener to a well-known family which were attended to by the lady of the household. When grown in a window it should be suspended no lower than the upper half. More light will thus fall upon it, this being essential to induce it to flower more profusely. Its growths will frequently reach far below the pot in which it is growing, continuing a long time in flower. It is a remarkably easy plant to propagate, division in the early spring being the better method of increase. In its culture the mistake that many make is that of over-potting. A smaller-sized pot with the soil made firmer will give the best results. The compost should consist chiefly of loam, with some pieces of lime rubble mixed with it, likewise a little decomposed leaf soil if available. A very fitting companion to this Harebell is *Campanula isophylla*, or the Ligurian Harebell, a most profuse-flowering and free-growing species. It has flowers somewhat larger than the subject so well depicted in the accompanying illustration. For rockwork outside in sunny spots both varieties can be relied upon to give every satisfaction. Another good old species is *C. garganica*, which is of closer growth, having darker coloured flowers than those of *C. fragilis*, which are of a soft shade of pale blue. These dwarf Campanulas are all natives of sunny Italy; hence it is not well to expose them entirely during our English winters.

SOUTHERN.

**Asclepias curassavica.**—This plant, which is referred to on p. 244, succeeds in an ordinary greenhouse temperature and is easily grown from seed sown in gentle heat. If the seed is sown in the early part of March, nice flowering plants can be had the same year, as the growth is rapid. Seed pods are freely borne, and when these approach the ripening stage the woolly-like covering over the seeds within the pods has a quaint, yet pleasing appearance.—E. M.

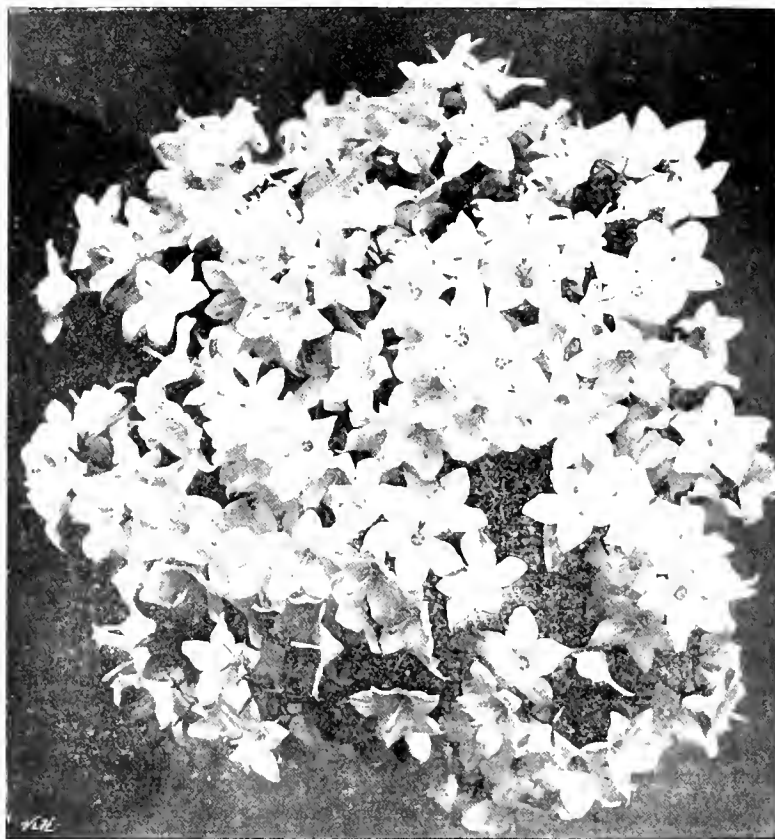
**Begonia Rajah.**—The different fine-foliaged Begonias, in the production of which *B. Rex* has played so conspicuous a part, are, I think, more grown than was the case a few years ago, and among them there are now some very beautiful forms, though most of the new varieties of this section come from the Continent. To the lover of *B. Rex* in its numerous forms the new *B. Rajah* will have much to commend it, for it is a decidedly pretty and very distinct Begonia, dense and compact, yet free in growth, and is as suit-

able as *B. Rex* for planting on rockwork or in similar positions. In this the major portion of the leaf is of a decided brown hue, while the course of the veins is marked with bright green. The under sides of the leaves are of a dull red colour. The surface of the leaf is somewhat puckered between the veins. It was discovered by Mr. H. M. Ridley, of the Botanic Gardens, Singapore, and has through that gentleman been introduced into this country. Being a native of the tropics, it requires the temperature of a stove, in which structure it will form a new and distinct feature. This Begonia was shown in good condition at a meeting of the Royal Horticultural Society last August, when a first-class certificate was awarded it.—H. P.

## CALADIUMS.

THE present-day culture of the *Caladium* affords an immense contrast to that of twenty-five or thirty years ago. Now we have a

temperature falls below 60° as an average, with 55° as the very lowest. With some growers it has been a practice as the plants become shabby to stand them out in vineries, so as to be clear of them in the stove. The penalty, however, has to be paid sooner or later; one season they may escape, but in the next they may possibly be left too long when the cold nights come on. No suspicion may be aroused until the following spring, when the question of shaking out for repotting is undertaken. If the bulbs be then found rotten throughout, it may be put down safely enough to the cold treatment during the autumn. I prefer to lay them on their sides under other stove plants when the pots are large. Some amount of moisture will reach them in this way; whereas if standing upright the pots might catch too much for the good of the bulbs. Another good plan—one which, all things considered, is the best—is to shake the bulbs out of the soil, clearing them carefully of



*Campanula fragilis.* From a photograph sent by Miss Burrowes, Moreton House, Buckingham.

number of varieties which possess the greatest diversity of colours in the richest possible shades; then we were confined to but a few really good sorts, not many of which are now found in gardens.

## CULTIVATION.

Caladiums are not in the slightest degree difficult plants to cultivate. Heat and moisture are the two chief essentials to success; given these, the rest of their treatment is easy. Where many fail, however, is in the treatment of the bulbs during the dormant period. More Caladiums have been lost by oversight at this time than during all the rest of the year put together. At no time, even when resting, should they be outside of the stove, whilst it is never desirable to let them remain in any position where the

their old roots and removing at the same time any decayed part round the base of the bulbs; then they should be covered with sand in seed-pans. To keep them entirely dry even then is a mistake; an occasional watering should be given to prevent the bulbs shrivelling. Dry rot will at times set in under the best of conditions, but it is greatly obviated by the bulbs being plunged in sand and watered occasionally. When the bulbs have been chilled, the decay is of a different character, being of a soft or soapy nature. Most of the Caladiums have been introduced from the district of Para—land drained by the Amazon and only a few hundred miles south of the equator. This fact at once speaks for itself as to the necessity of warmth when at rest even,

as it also does to the inadvisability of keeping them too dry. Coming from the valley of the Amazon points also (assuming that their habitat is congenial to them) to the fact that alluvial soil, rich in decaying vegetable matter, is the proper soil to choose, or at least to imitate as nearly as possible. In my own experience this has been borne out, for I find that the best of leaf-soil with a little good loam and road scrapings is as good a choice as can be made, two-thirds of leaf soil to one of loam being a good proportion. Failing good loam I have added old Mushroom-bed manure with excellent results. Firm potting is not needed, by this I mean ramming of the soil; all the work may be done with the hands unless it be a large plant, to which a shift is being given during its growth, then a potting-stick may be useful, but it should be used sparingly. It is far better to err on the side of small pots than to go to the other extreme, for *Caladiums* can be watered freely, being gross feeding plants. I do not care for artificial manures as stimulants, natural manures being much better, liquid farmyard manure or that made from good Peruvian guano being two good selections. I have frequently watered with the latter when the plants were infested with fly at the base of the leaf-stalks, with good results in exterminating this insect. Although *Caladiums* enjoy moisture in the atmosphere as well as at the roots, it is never advisable to wet the foliage overhead with the syringe, more particularly if the water be hard; it water-marks the leaves in the same way that it does bunches of Grapes. Shading is needful as the sun gains power. After the middle of March it should be the rule to shade from bright sunshine, but not heavily, the ordinary shading of a stove being sufficient at any time. The light-coloured varieties are seen to better advantage when shaded a little more than the others. When it is seen that the growth is ceasing, then far less water will be needed; a warm pit from that time would be a good place for them. Some kinds will push up several flower-spines after having formed a leaf or two in the spring; these should be pulled out in good time. The time of starting into growth can be regulated so as to suit each case, but, on the whole, the month of February is a good starting time. Starting in too much soil or, in other words, large pots, is a great mistake.

#### VARIETIES.

The following may be taken as a good selection of twenty-four kinds of various habits. To give colours is scarcely needed, seeing that so many catalogues give descriptive lists. As dwarf kinds, *C. argyrites*, *C. minus erubescens*, *C. Souvenir de Para*, and *C. Ibis Rose* are worthy of all that can be said in their favour; *Mme. Leon Say*, *Reine de Danmark*, *Raymond Lemoine*, *Comte de Germiny*, *John Laing*, *Marquis F. d'Albertus*, *Mrs. H. Veitch*, *Mons. Willaume*, *Mercedes d'Argent*, *L'Autonne*, *Comtesse de Brosse*, *Charlemagne*, *Cardinale*, *La Lorraine*, *Lymington*, *Louis A. van Houtte*, *Gaspard Crayer*, *Glück*, *Triomphe de l'Exposition*, and *Candidum*, one of the best light-coloured varieties. G.

**Impatiens Sultani.**—If this is raised from seed I do not see much good in sowing it before March is tolerably advanced. If sown much earlier the seed is apt to germinate badly and the young plants will often come to a standstill should the weather be very dull and cold in the early stage of their growth. This very attractive Balsam is of quick growth, and as comparatively few care to have larger specimens than can be produced in 6-inch or 7-inch pots, there is not the need for such early propagation as is the case

with plants of slower growth. In a temperature of from 60° to 70° this *Impatiens* will make rapid progress, a never-failing supply of warmth and atmospheric moisture being the important factors in its well-being. Cuttings strike with great freedom at this season, this being the method of increase generally followed. It is, however, advisable to have a plant or two in small pots for furnishing cuttings, larger specimens being apt to damp off in winter.—J. C. B.

### NOTES OF THE WEEK.

**Streptosolen Jamesoni** is a plant, I fear, not grown so extensively as it should be, for it is a gem for late winter and early spring flowering—a decidedly pretty combination of colours. The flowers keep well when cut and used for indoor decoration. It is of easy cultivation and will flower at almost any season, but is, I think, prettiest and most useful at the time named.—J. R., *The Gardens, Tany-bulch*.

**Bunch Primroses and the frost.**—Hardy as these are they suffered this year in our garden. In a long border near my cottage, facing west, many plants were killed, while those growing on a north border have not suffered in the least, the leafage being as good as last autumn. I note the common Primroses had all the foliage killed in many places. Wallflowers are all killed, in borders and on the stone walls round the abbey.—J. CROOK.

**Rhododendron Early Gem.**—In spite of the recent severe winter this *Rhododendron* about three weeks ago was in full bloom in the Coombe Wood nurseries of Messrs. J. Veitch and Sons, and is still in flower. This shows how hardy the shrub is, as many things have suffered greatly through the prolonged severe frost. The purplish colour of the flowers was very rich in contrast to the deep green glossy leafage.

**Hedera atropurpurea and the Forsythias.**—If one desires a pretty contrast of colour it can be got by planting these two things together. A few flower-laden shoots of the *Forsythia* spreading over the deep purple, almost chocolate-coloured leaves of the Ivy have a rich effect. This variety of the Ivy is not often seen, but it is very handsome, the leaves rich in colour and the growth vigorous.

**Rose Reine Marie Henriette.**—In our garden this Rose is not in the least injured. I planted a big plant from a pot some two years ago on a south wall. Last year it gave us some splendid blooms, and it promises well for this year. It is far hardier than many other Teas and climbing kinds growing by its side. *Catherine Mermet* and *Yellow Banksian* are sadly cut, while such kinds as *L'Idéal* are killed to the ground.—J. C., *Forle Abbey*.

**Daphne Genkwa.**—This, recently in bloom in a cold house at Coombe Wood, is a delightful shrub to force gently, as its clusters of rich lilac, almost violet-coloured flowers are distinct from other things in bloom at this season, and one desires as much change as possible in the greenhouse plants in spring. The flowers are fragrant, but not so much so as those of the *Mezereon*. *D. Genkwa* was brought by Fortune from Japan in 1866, but it is comparatively rare. When in the open it blooms usually at this time, and should have a sheltered corner.

**Magnolia stellata.**—The late frost has injured the evergreen *Magnolias* everywhere almost without exception, and often to such an extent that not a single green leaf is visible. But amidst the wholesale destruction wrought among shrubs by the exceptionally severe weather, *Magnolia stellata* has escaped. In the nurseries of Messrs. Veitch, Exeter, a specimen is just now in full bloom, presenting a beautiful sight. Although the plant is scarcely 4 feet in height, it is covered with more than fifty large snow-white blossoms. The plant is growing against a low wall with a western aspect. That it is perfectly hardy

without such protection is proved by another plant growing as a bush in a perfectly open and exposed position at Newton Abbot. This also is in full bloom at present, though it has not received the slightest shelter of any kind.—F. W. M.

**March rainfall in Wales.**—I presume the rainfall here (including snow) during March "beats the record" for even this humid district, for out of the thirty-one days we had but seven without rain in measurable quantity, and most of them were dull and sometimes foggy, so that the sunshine was almost nil. The total rainfall for the month was 8.31 inches, the greatest fall occurring on the 23rd, 1.36 inches. During the month we recorded rain exceeding an inch on three days, viz., 19th 1.18, 23rd 1.36, and 28th 1.03, so I think, taken altogether, we had enough.—J. R., *Merioneth*.

**Persian Cyclamens at Farnham Royal.**—We recently noticed a very fine collection of Persian Cyclamens in the nursery of Mr. James, Farnham Royal, near Slough. The colours were superb, especially the shades of crimson. A very fine variety had rose-pink flowers, another white flushed with pink, set off with a crimson base, whilst in another case they were white, one of the largest and purest white forms we have ever seen. One sees so many objectionable magenta and allied tones in the flowers of the Persian Cyclamen, that it is delightful to see such care taken to get the clearest and brightest self.

**Notes from Baden-Baden.**—One of the prettiest sights in my garden is just now a bed of *Anemone blanda scythica*. It comes from North Kurdistan, and is distinct from the type and *blanda cypriana*. One-tenth of the plants has pale or sky blue flowers, nine-tenths are of the purest white. It is quite a treat to look at these white stars. There are several forms of *Muscari azureum*, *M. a. Freynianum* being the best. The spikes are two to three times as large as in the typical form, and of the same or even a brighter turquoise-blue colour. A new *Fritillaria* is very striking. It grows 5 inches or 6 inches high, and the flowers, as large as a hen's egg, are of a deep claret-red, inside tessellated white. *Iris mesopotamica* is a fine novelty. The flowers are much like those of *I. sindjarensis*, but they are broader, fuller, and of a pleasing milk-white colour with a sulphur-yellow crest.—MAX LEHTLIN, *Baden-Baden*.

**Camellia reticulata.**—It is unfortunate that this fine *Camellia* is not more plentiful, for although it was introduced about 1820, it is only to be found in a few places in England. We have a fine plant on the conservatory wall. It has been in bloom for some time, and will be for a considerable time yet; the flowers are semi-double, large, over 7 inches across, of a glowing pinkish crimson, and frilled. This *Camellia* is quite distinct from all the other singles or doubles, its flowers being free from the stiff form of the single cup-shaped or the double imbricated formal flower. A large plant of this *Camellia* would be most effective in bush form if planted out in a large house along with such as *Donkelaari*, the *Old Double White*, and many more that could be named of equal merit. Such a house would be most attractive when the *Camellias* were in bloom during the dull winter months, particularly in such a winter as we have lately had.—A. KEMP, *Coolhurst, Horsham*.

**Forsythias.**—The bright yellow of the flowers of these Japanese shrubs, their profusion, and the exceeding grace with which they are displayed make the *Forsythias* amongst the most welcome of all our spring flowering shrubs. There are two species, *F. suspensa* (or *Fortunei*), *F. viridissima*, and a hybrid between them called *intermedia*. *F. suspensa* is the first to flower, and is easily recognised by its lax habit. The hybrid follows, and lastly *viridissima*, although so closely that all three may be seen in flower at one time. The last named is a shrub of more sturdy, erect habit. To get a fine effect these *Forsythias* should be planted in large masses and be given if possible a background of some evergreen like the *Box* or *Holly*. They can be struck from cuttings

or layers so finely, that it is very easy to obtain a good stock.

**Asparagus plumosus.**—No better illustration of the value of this species as a climbing plant can be needed than that afforded at Mr. Icton's nursery, Putney Park Lane. It is there grown in large quantities, not only for cutting, but also for the purpose of seeding, so as to meet the large demand for seed, which is the only reliable mode of increase other than by division. On a recent visit I was greatly struck with the excessive vigour of the plants, which are being grown in borders rather than in pots. Several young shoots were pushing up that were quite as large as the average lead pencil. Mr. Icton had for experiment cooked some of these, and found them to possess the true *Asparagus* flavour. In one house the growths were so dense as to envelop the under side in a complete shade. A temperate treatment is found to answer well. Considering its durability in a cut state, this *Asparagus* is not even now grown in sufficiently large quantities; of its utility there can be no manner of question.—H. G.

**Franciscea Hopeana.**—It is not often that one now meets with this species—an old one it is quite true, but none the less welcome. I noted it quite recently flowering in the stove show house at Messrs. Veitch and Sons', Chelsea. Compared with most of the *Franciscea*s this variety has smaller flowers, but this is more than compensated for in their great profusion, extending over a long season, one crop often succeeding another in rapid succession upon the merest bit of wood. The flowers, which are deliciously scented, open at first of a light violet shade, gradually fading away to pure white with age. In the more favoured districts of the south this *Franciscea* may be stood outside to mature its growths after completion of growth, then when again introduced into warmth it will soon yield a crop of bloom. Being a somewhat slow-growing plant, it remains for a long time of a convenient size. In a cut state it is admirably suited for making button-hole bouquets. It is also known under the specific name of *F. uniflora* and is one of the oldest species in cultivation.—J. HUNSON.

**Orchids from Edinburgh.**—I am sending you per this post a few blooms of Orchids. A bloom of *Cattleya* which I send seems to be near to *C. intermedia*, but it has this year a much stronger bulb, more like that of *C. amethystoglossa*. It is 18 inches in length, with three leaves, as against two in former years. The larger bloom of *Cattleya Trianae* is rather over, but the smaller, which is not quite developed, being from a very small bulb, which ought not to have been allowed to bloom, but was overlooked, shows fairly well the colour of the larger flower; it is a very fair variety. I send three vars. of *Vanda tricolor*, two vars. of *V. insignis*, *V. suavis* Veitchi, *Dendrobium Venus*, *D. japonicum*, two blooms of *D. Ainsworthi*, a few *D. nobile* vars. and *D. Wardianum*, *Cypripedium villosum aureum*, *Cattleya Skinneri*, *Odontoglossum Rossi majus* varieties, *O. crispum*, *Laelia anceps*, *Cymbidium Lowianum*, and *Coeloglyne sparsa*.—H. J. JAMES HUNTER, Edinburgh.

\*\* A beautiful gathering of Orchids, the flowers carefully packed and fresh. The *Cattleya* sent is *C. intermedia*. The flower of *Cypripedium villosum aureum* is that of a very fine variety.—Ed.

**Notes from Paris.**—The season is very late this year. *Anemone nemorosa* is coming into bloom in the woods round about Paris. In the St. Germain Forest the ground appears in the distance as if covered with a white sheet of bloom. Here and there some flowers of the blue *Pulmonaria officinalis* are appearing. In the garden *Omphalodes verna* is opening its Forget-me-not-like blue flowers along with the yellow *Doronicum caucasicum*. *Primula denticulata* and *P. cortusoides amona* are showing their first blooms. These have not suffered in the least from the severe winter, although the thermometer in February for several days registered as low as

20° centigrade. A plant of *Aralia (Fatsia) japonica*, quite unprotected in the border and planted out years since, had its leaves slightly injured by frost and snow, but the wood is quite safe. It is a general idea amongst gardeners here that these Japan *Aralias* are not hardy. In the same border I have a dozen plants of *Musa Basjoo*, the north Japan Banana tree, a native of Hakodate, in the Isle of Yezo. These were planted out four years ago and slightly protected in winter with dry leaves. All of these are now starting into growth. The Horse Chestnuts are unfolding their leaves (April 15).—J. SALLIER.

**Rhododendron arboreum.**—The value of this shrub for large conservatories and winter gardens is by no means so fully taken advantage of as it might be, for there are few if any plants that produce at this season so bright and glowing a mass of colour as it does. In the typical form the flowers, of a brilliant red, are produced in rounded, cone-shaped trusses about 4 inches or 5 inches through, resting on a rosette-like whorl of dark green leaves. It is, however, an extremely variable species, and the different varieties have flowers ranging in colour from the brilliant red just mentioned to rose and pure white. One of the best of the rosy-flowered varieties, *nilagiricum*, has been figured in THE GARDEN, July 20, 1889. There is, besides this, another variety called *limbatum*, a fine specimen of which is in bloom in the temperate house at Kew, and which has flowers very similar to those of *nilagiricum*, but its leaves, instead of being rusty coloured beneath, are silvery grey. Where these *Rhododendrons* cannot be grown out of doors (and it is only in the south and south-western counties that the climate is mild enough for that), a house with sufficient fire heat to maintain a temperature above freezing point in the severest weather and which is kept moist and well ventilated in summer is best suited to them. *R. arboreum* is the oldest Himalayan species in cultivation, having been introduced in 1820.

**Rhododendron fulgens.**—The brightest flowered of hardy shrubs at this season is unmistakably *Rhododendron fulgens*. Whilst the various trees and shrubs belonging to the great rosaceous family—the Plums, Almonds, Peaches, &c.—give us whites and pinks in abundance, and the Forsythias provide shining masses of yellow, the only real red is this *Rhododendron*. In the dell which at Kew is devoted to these shrubs there is a plant of *R. fulgens* some 7 feet high. It rarely misses flowering. That after such a winter as the past it should be uninjured in foliage and now have a flower-truss on almost every twig speaks well for its hardiness, even though sheltered by trees from north and east. The flowers are of a rich blood-red, each about 1½ inches across, and the whole compact, rounded truss 3 inches to 4 inches in diameter. The species is a native of the Sikkim Himalayas at an altitude of 12,000 feet to 14,000 feet, and Sir J. Hooker, who introduced it in 1851, says that it is "one of the richest ornaments of those inhospitable regions, the flowers glowing like fire in the short hours of morning sunlight." In foliage it resembles *R. campanulatum*, another Himalayan species also in flower. In both instances the leaves are covered beneath with a reddish felt; the flowers of *R. campanulatum*, however, are white. Other *Rhododendrons* in flower at Kew are *dauricum*, purple; *Nobleanum*, rosy red, and *præcox*, pale rosy purple.

**Notes from Wales.**—So wintry an aspect of all vegetation in the middle of April in this district is happily of rare occurrence. All plants are wearing their winter garb; consequently there is but little bloom in the open. A few *Rhododendrons* of one variety only—supposed to be Cunningham's White—are the most conspicuous flowering objects on the place. *Prunus Pissardi* is showing colour, a few varieties of *Berberis* are just opening, and *Andromeda floribunda* has not yet expanded. There is no *Laurustinus*, for all the bloom buds were killed. Daffodils on grass are developing, early and late varieties

having a neck-and-neck race, so all will be in bloom together. Primroses and Polyanthuses, the pretty wood Anemones and the modest Violets combined add brightness and sweetness to our sunny banks, while patches of *Andromeda axillaris* are even now attractive. Our rocks are still devoid of much floral beauty. A few *Erica carnea*—white and pink—*Daphne Mezereum*, a clump of *Hepaticas* here and there, mostly *triloba*, *Chionodoxas*, an occasional sprig of *Omphalodes verna*, some of the earlier Saxifrages, the old double yellow Wallflower—a rare plant now-a-days—and some Anemones, exceedingly bright, are about the sum total of flowering plants thereon. Of damage done by the extremely severe and prolonged winter, followed by excessive rainfall, I hope to report on later, when one can reckon the losses more accurately than at present, for while the destructive easterly winds now prevailing remain, it is risky to jump at conclusions.—J. R., Merioneth.

**Royal Horticultural Society.**—The next meeting of the Royal Horticultural Society will be held in the Drill Hall, James Street, Westminster, on Tuesday, April 23. In addition to the society's ordinary show, the National Auricula and Primula Society will hold its annual show. At 2.30 p.m. a conference on Primulas and Auriculas will be held in the hall. Professor Michael Foster, F.R.S., has promised to preside, and the following papers will be read: "New Primulas," by Mr. J. G. Baker, F.R.S., &c.; "Culture, Classification, &c., of Primulas," by Mr. Selge-Leonard; and "The Auricula," by Mr. J. Douglas. The council will be glad of exhibits of as many different natural species of Primula as possible.

**Hardy fruit growing.**—The council of the Royal Horticultural Society of Great Britain offer a prize of £10 for the best essay on "The Commercial Aspect of Hardy Fruit Growing in the United Kingdom." The essay, not to exceed 10,000 words, is to be sent under seal to the secretary of the society, 117, Victoria Street, Westminster, on or before August 1, 1895, each essay to be signed with a motto and the writer's real name and address enclosed in a sealed envelope bearing the same motto outside, the prize essay to become the sole property of the council of the society to deal with in any way they may think fit. Unsuccessful essays will be returned after October 1, 1895, on application, enclosing the necessary postage and the motto of the writer.

**The weather in West Herts.**—During the past week the nights have been, as a rule, cold, but on several days the temperature has risen above the average for the time of year during the warmest part of the day. On the 17th the highest reading in shade was 64°, whereas on the night preceding the 14th the exposed thermometer showed 7° of frost. There was a slight fall of rain on Tuesday night, otherwise this was a dry week. There has been a capital record of sunshine during the past eight days, the average duration for this period amounting to nearly nine hours a day. A Peach tree trained to a south wall in my garden came first into blossom on the 4th, which is a week later than its average date for the previous nine years and thirty-one days later than last year. The wood Anemone first flowered on the 10th inst., or eleven days later than in the same wood last year. The swallow first made its appearance at the Watereress beds here on March 28—an unusually early date.—E. M., Berkhamsted.

**Cobbett's Gardening.**—Will any reader kindly tell me the date of the first edition of this work?—X.

**The New Zealand Veronicas.**—Will any reader who grows the New Zealand Veronicas kindly tell me how they have fared after the past severe winter?—H.

**Books received.**—"Beeton's All About Gardening," New and enlarged edition. "Fruit Growers' Association, Ontario," twenty-sixth annual report. "Agricultural Gazette of New South Wales."



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"Gentlemen,—The 'Easy' Lawn Mower I got from you seven or eight years ago has been a splendid machine. "ROBERT BOA"  
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"The Gardens, Laleham House, Staines.  
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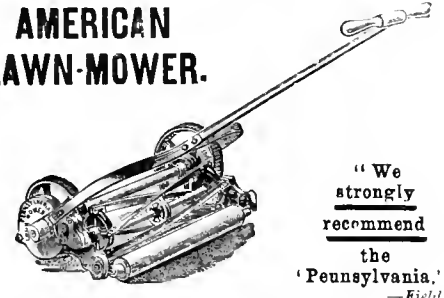
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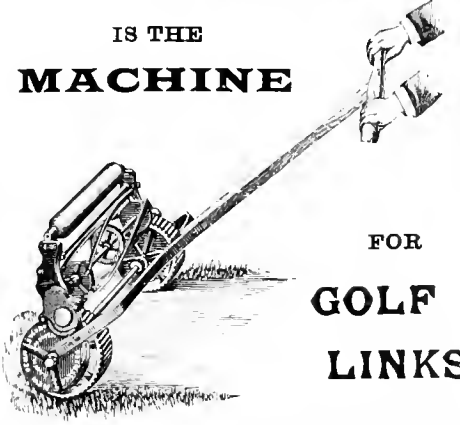
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No. 1223. SATURDAY, April 27, 1895. Vol. XLVII.

"This is an Art  
Which does merd Nature: change it rather; but  
THE ART ITSELF IS NATURE."—*Shakespeare*.

## ORCHIDS.

### NOTES ON PHALÆNOPSISIDS.

THE long cold winter has been very trying to these beautiful Orchids, and the effect of the low temperatures which prevailed is in many places too apparent. Nothing is more annoying than to grow a fine plant, to nurse it as carefully through the winter as circumstances permit, only to find it in spring rapidly decreasing in size by the loss of the lower leaves, yet this is unfortunately the position of many growers just now. Failures should have their advantages as well as disadvantages, and may often point out useful lessons for future guidance. The present is a suitable time for a thorough overhauling, cleaning, repotting or surfacing of these Orchids, the temperature now being sufficiently high to prevent checking the plants, they also having the best of the growing season before them. It is hardly necessary to say that, unless it is absolutely unavoidable, Phalænopsisids ought not to be disturbed at the roots, but baskets and cylinders will decay; composts, however carefully prepared, eventually lose that sweet, open condition so necessary to the well-being of the roots, and the cultivator must step in to prevent the backward tendency that this entails. The best way to provide a new rooting medium for the plants and to transfer them to it will be the first consideration. It has been my experience that Phalænopsisids of the stronger growing kinds, as *P. amabilis* and *P. Schilleriana*, transplant much better from pots or pans than from baskets or cylinders, because of the freer ramification of the roots among the drainage. A root running straight down the rod of a cylinder for a foot or 15 inches is all very well as long as the wood lasts, but when the time arrives for moving the plants it will be found very difficult to do so without damaging them considerably. With pots or pans, on the other hand, no matter how firmly the roots have taken to the sides, we have only to carefully break them, pick or wash away all loose pieces of potsherds and dead roots, while those with living roots clinging to them may be placed in the new pots. This, too, sounds easier to do than it will be found in practice, but with care it may be done without checking the plants. Against the use of pots I have to urge the undoubted liking that the roots of Phalænopsisids have for wood and the length of time they live upon it. Taking into consideration the rapidity with which this decays in the heat and moisture of the East India house, I am inclined to prefer pots for these more robust growing kinds, using blocks and pans for the weaker growing species. The pots used may be deep rather than broad, those with perforated sides being preferable, the free circulation of air about the roots being conducive to their longevity. The greatest care is needed in placing the plants in their new pots to avoid bruising the roots, pot-tery ballast being preferable to broken pots as drainage for this reason. This may be brought right up to the base of the plants, kept higher in the middle, and the plants secured as firmly as may be before putting the layer of Sphagnum on. This must consist entirely of clean growing points and must be kept alive, being in this state a capital index to the moisture in the pot.

In transferring plants from old to new baskets even greater care and judgment are needed. The first thing necessary is to wash away all the Moss and remove all the old crocks that can easily be got at. A fine toothed saw such as is used by carpenters for dove-tailing should be used for severing the rods in as many places as needed to pull the basket to pieces, avoiding the roots where these are clinging to them. Here the rods may have a thick strip cut off with a sharp strong knife, making no attempt to detach the roots, but placing the strips in the new baskets, filling up around the base of the plants with large pieces of charcoal, fixing so that they cannot slip about, or the roots cannot obtain a hold of them. The mode of transferring block plants has recently been referred to in THE GARDEN, and a little care in this operation is amply repaid in the results attained. The whole of the plants after being disturbed should be subjected to a kind of convalescent treatment, a little more heat and shade being afforded for a time and the plants kept in a nice moist temperature. It is not advisable to damp the foliage much, but a slight sprinkling on bright days will be beneficial. A suitable night temperature will now be 60° to 65°, rising by fire-heat on dull days to 75°, by sun-heat running up to 85°, increasing the air as the plants re-establish themselves and inuring them by degrees to a stronger light. If flower-spikes appear before the plants have taken a hold of their new home, it is a good plan to restrict the number of flowers upon them, but not to entirely remove the spikes, as this may possibly cause secondary ones to be produced, the plants being proportionately weakened. H. R.

**Cypripedium selligerum atro-rubens.**—*C. selligerum* was raised in the nurseries of Messrs. Veitch and Sons some seventeen or eighteen years ago. *C. selligerum atro-rubens*, although not so stately as the variety *majus*, is of grand form and, as the name implies, of fine colour, the veining in the dorsal sepal being rich rosy purple and the petals also nicely suffused. The parents of this variety are *C. barbatum* × *C. philippinense*.—W. H. G.

**Lælio-Cattleya Pallas superba.**—This beautiful hybrid from Mr. T. Statter's collection is one of exceptional merit. It is the result of crossing *Lælia crispata* with *Cattleya Dowiana*. The sepals and petals are both pale rose, the side lobes of the lip being rather deeper in colour than the other segments, whilst the large front lobe is beautifully crisped and of an intense rich violet-purple, faintly veined in the throat with yellow.—W.

**Odontoglossum polyxanthum** (Hardy's variety).—This very beautiful and distinct variety of this fine species was shown by the gentleman whose name it bears at the recent meeting at the Drill Hall. The sepals and petals are broadly lanceolate, of a lemon-yellow ground colour, the former blotched and the latter spotted with very dark cinnamon-brown; the lip is broad and flat, of a chocolate colour, excepting a small space at the base, and a fringe at the apex, both of which are pure white.—W. H. G.

**Cymbidium eburneum.**—"W.," writing of this beautiful Orchid at page 229, says it first flowered in this country about seventeen years ago. This is an error; it was flowered in Messrs. Loddiges' nursery in 1847 and was figured in the *Botanical Register* in that year. It flowered again in the Hackney Nurseries the following year, May, 1848, and a drawing was prepared from it for the "Magazine of Botany." The plant was introduced from the Khasya Hills in 1837 by Griffiths, and therefore it did not flower for ten years after its introduction. The first variety that flowered had no spots, but varieties with the lip more or less spotted are found in importations. The temperature in which the plant ought to be grown and its other cultural requirements are now

well understood, and when once the plant is well established its culture is not at all difficult. It will not thrive in peat, and although some good growers use a little peat in the compost it is not necessary. The main part of the potting material should be good loam, although of this all kinds are not suitable. That in which I have found it do best is found on commons where the Brackens thrive. Tough fibrous material, decayed sufficiently to kill the grass, is what the plant delights in. I have tried them with a third part of loam to one of peat, and they have done equally well in either. The use of Sphagnum with the compost may or may not be desirable; it is certainly not necessary. A good proportion of crocks is certainly beneficial and has the effect of keeping the compost open for two years. After that time repotting is necessary.—J. DOUGLAS.

**Dendrobium Phalænopsis Schroederianum.**—With the increased temperature and light this splendid species will be growing rapidly, producing growths not only from the base of the pseudo-bulbs, but also towards the tops. These latter growths are very useful for propagating, and young plants raised from them grow away with great vigour when once established. If taken off too soon, however, they are not always satisfactory, and even if taken with a portion of the old bulb attached—as, in fact, they should be, they are often a long time before they make any headway. In a letter from a friend, who is very successful with Orchids and an enthusiast in their culture, he says that he has had very good results by placing small pans in juxtaposition to the new growths, these being elevated for the purpose on stakes or otherwise and filled with compost in the ordinary way. This allows the growths to root and establish themselves before being removed from the parent bulb. The advantage will be obvious to anyone, and I should say the results would amply repay the little trouble involved. It would possibly be necessary to enlarge the holes in the bottom of the pans in order to pass them over the bulbs and growths, this being preferable to splitting the pot, as in the old-fashioned plan of ringing Crotons and other plants. My correspondent says the difference between plants raised in this way and any other with which he is acquainted is surprising, much time being saved, as they are not checked in any way, but grow in a perfectly natural manner from the first.—R.

**Cattleya Lawrenceana.**—This grand *Cattleya* is one of the finest introductions of late years. This plant produces its spikes of bloom from March until May. The flowers are usually of a rich rosy purple, the lip shaded with maroon-purple; there are, however, several lighter coloured varieties, but the darker forms are decidedly the more beautiful. This superb *Cattleya* grows in abundance in British Guiana at about 3000 feet to 4000 feet altitude upon the branches of trees in sheltered positions.—W.

**Dendrobium capillipes.**—On a recent visit to Messrs. Lewis and Co.'s nursery at Southgate I saw a fine example completely covered with flowers deep golden yellow throughout, and produced singly and in pairs on peduncles that just reach above the leaves. Thus a good-sized well-flowered plant upon a raft, as was the specimen referred to, has the appearance of a dense mass of yellow colour. It is found in Moulmein, and was imported about thirty years ago by Messrs. Low and Co., of Clapton.—G.

**Spathoglottis aurea.**—Of the few species comprised in this genus, this is the most useful and beautiful. It was introduced by Messrs. Veitch some fifty-five years ago from Mount Ophir, a mountain in Malacca, but it appears to have been lost to cultivation or to have become an exceedingly scarce plant, and remained so until re-introduced about ten years since by Mr. Sander, of St. Albans. Being a terrestrial Orchid, it should be potted in a good mixture of turfy loam, fibrous peat, and silver sand, with the addition of some chopped Sphagnum, plenty of drainage being given. This plant should be grown in the East India house.

The flowers are produced upon an erect scape, from 2 feet to 3 feet high, and a succession is kept up for several weeks. The individual blooms are 3 inches in diameter, the sepals and petals of a bright canary yellow, the former striped on the outer surface with red; the lip is also clear yellow, streaked with chestnut-red and spotted with the same colour on the basal portion.—H.

**Cattleya Schroederæ.**—This somewhat resembles the popular *C. Trianae*, and flowers about the same time. Mr. Joseph Broome, of Llandudno, sends me some beautiful flowers, each measuring fully 7 inches across, the colour very delicate, whilst the orange-red throat of the lip is very pronounced. An albino is also included, and although this is the best white form I have yet seen of *C. Schroederæ*, it cannot be called pure white, as there is a decided tint of blush in the lip; the bloom is of fine size and good substance, with very broad petals, the lip large, beautifully fimbriated, and broadly expanded, with much less orange-yellow in the throat than is found in the coloured varieties. It is certainly a chaste and beautiful form.—W.

**Cypripedium Morganii langleyense.**—Although *C. Morganii* is one of the very finest hybrids in this genus that have yet been raised, the variety *langleyense* is much superior to the original form, as may be supposed, seeing that the finest varieties of the parent plants have been used. This is a cross between *C. Stonei platyanium* and *C. superbium*. This variety is superior to the original in having larger, broader, and better defined petals, and the whole flower is richer in colour. This, like the type, was raised by Messrs. Veitch and Sons, and I believe flowered for the first time about twelve months ago.—G.

#### BARKERIAS.

There are but few species in this genus, which was established by Knowles and Westcott. Recent authorities have included them with *Epilendium*; nevertheless, they are still known in our gardens under the above name. It is a pity that these plants are not more extensively grown, for their requirements are few and they do not occupy a great amount of space. *Barkerias* are all natives of Central America, where they grow upon the branches of trees in Mexico, Costa Rica and Guatemala. The best way to treat them under cultivation is to place them upon blocks of wood without any soil round their roots. Many have failed with *Barkerias*, owing to keeping them too dry and giving too much heat, the most suitable temperature being similar to that maintained for the Mexican *Lælias*, where they can obtain a plentiful supply of fresh air and sunshine, both these being essential. *Barkerias* enjoy being frequently syringed, and during the summer months need very little or no fire heat. They are compact-growing plants with slender pseudobulbs, and being deciduous, lose their foliage during the resting season, at which time very little water will be required. The flowers, produced at different times during the year and continuing a long time in perfection, are borne on stems rising from the top of the bulbs. The following are the most beautiful, and well merit a place in every collection:—

**B. CYCLOTELLA.**—A very pretty kind, introduced from Mexico about fifteen or sixteen years ago, is often classed as a variety of *B. Lindleyana*. It blooms in the early months of the year, producing terminal racemes of very showy flowers, each measuring about 2 inches across. The sepals and petals are of a bright magenta purple, as is also the lip, excepting the disc, which is white.

**B. CENTREI.**—A fine form and very showy, introduced in 1873 from Costa Rica by Messrs. Veitch and Sons. The flowers of this plant often measure quite 3 inches across, the sepals and petals being bright rose, the lip white, tipped with rich

purple. The slender peduncle carries eighteen to twenty flowers upon a raceme.

**B. BARKERIOLA.**—This is a very small-growing species, not attaining more than about 3 inches in height and not so attractive as many of the other kinds. The peduncle bears three or four white flowers, suffused with a lilac tint, the tip of the lip being bright purple. This pretty little plant was introduced by Mr. F. Sander, of St. Albans, about 1884, and does better with rather cooler treatment than most of the others.

**B. ELEGANS.**—It was upon this plant that the genus was founded, having been introduced to cultivation by Mr. Barker in 1837 from Mexico. Although the first kind known, it still remains one of the best. For many years it remained a very scarce plant. The flower-stems are each about 18 inches long, terminating in a raceme of five or six blooms, which individually measure upwards of 2 inches across, the sepals and petals rich purple, suffused with white; the lip white, with a large purple blotch on the front.

**B. LINDLEYANA.**—A very beautiful species, often bearing from eighteen to two dozen flowers upon a raceme. These, appearing about September and October, are rosy purple, the lip having a large white disc. It is a very distinct and desirable species, growing about a foot in height, with leaves from 4 inches to 5 inches long. It was discovered by Mr. Ure-Skinner in Costa Rica, and first flowered in this country with Mr. Bateman about fifty-five years ago.

**B. MELANOCALON.**—This is a very distinct and rare kind. The flowers, produced freely, are of a rosy lilac colour, the lip having a blotch of green in the centre. It appears to have first been seen in bloom nearly fifty years ago, when it was described by the late Prof. Reichenbach.

**B. SPECTABILIS.**—One of the finest in the genus, although known in our gardens for many years. It flowered first in the gardens of the Royal Horticultural Society at Chiswick in 1842, but is at the present time seldom met with. The flowers are 3 inches or more across, of a rosy lilac colour, and spotted with red. It is a native of Mexico and Guatemala.

**B. SKINNERI.**—This, at the present time a rare plant, flowers during the winter months. It inhabits the same countries as the preceding kind at considerable altitudes, and was first sent home by Mr. Ure-Skinner. The flowers, produced freely, are bright rosy purple, excepting the lip, which is orange-red, with streaks of yellow on the disc.

*Barkerias* during late years appear to have lost public favour, but they are certainly worth the attention of cultivators, and those who have the accommodation for the Mexican species of *Lælias* should again take up their culture.

WM. HUGH GOWER.

**Dendrobium atro-violaceum (Ashby).**—This, I believe, has been in commerce for five or six years, having been introduced by Messrs. Veitch and Sons from New Guinea. It is a beautiful *Dendrobe* and quite distinct from other kinds. The flowers are produced on the leafless stems in pairs and threes. The sepals and petals are greenish yellow with deep purplish spots, and the lip is of a rich purplish colour. It is a very beautiful species, allied to *D. macrophyllum*, and requires strong heat to grow it successfully.—W.

**Odontoglossum triumphans.**—I am in receipt of two forms of this fine *Odontoglossum*. That from Mr. James Miller is of large size and beautifully coloured, the sepals heavily blotched with deep cinnamon-brown, the petals golden yellow, with smaller blotches and bars of a similar shade to those on the petals. The lip, white and finely fringed, has a large square spot of a reddish brown on the anterior portion, whilst the raised crest is very prominent. The other flower sent by "L. O. L." is similar, but the segments are not so broad. This species is one of our finest cool house kinds. It is very showy when in flower, producing an erect spike from 2 feet to 3 feet in length,

the individual blooms measuring 3 inches and more across. It is a native of New Grenada, where it grows at a considerable elevation on the mountains.—W. G.

**Angræcum Sanderianum.**—I have recently noticed this in several collections, and in some instances quite small plants have carried a couple of long, drooping spikes each with sixteen and eighteen blooms. It is a native of the Comoro Islands, and therefore enjoys strong heat under cultivation. The plants are naturally small, the narrowly oblong foliage not growing larger than about 6 inches, whilst the spike often measures three times that length. The pure white blossoms are each an inch across, the slender spur, which is also pure white, being upwards of 3 inches long. This plant much resembles *A. modestum*, but is distinguishable even when not in flower by having larger and broader leaves.—G.

**Celogyne lentiginosa (Ashby).**—All the kinds in this section produce their blooms on pendulous racemes, and are therefore better accommodated in shallow pans or wooden baskets, so that they may be suspended from the roof. This position not only suits their requirements by enabling them to obtain as much light as possible, but the flowers are seen to better advantage. This plant, a native of Moulmein, has flowers with straw-yellow sepals and petals, the lip being yellowish brown, margined with white, the side lobes also white, spotted with brown.—W.

**Cypripedium Lindleyanum.**—This is a strong-growing plant, the leaves attaining a length of 2 feet, and upwards of 3 inches broad. From such strong growths one would expect a fine large bloom, but this is not the case, for the flowers do not measure more than about 2½ inches across, and are borne on very long scapes. These are of a pale greenish colour, with red-brown veins, the lip of a similar shade, but somewhat darker. It succeeds well in a comparatively cool temperature, and is a native of British Guiana, where it is found at an elevation of about 6000 feet.—G.

**Cattleya Trianae at Southgate.**—Amongst a splendid lot of this useful spring flowering *Cattleya* that is now quite gay in the nurseries of Messrs. Lewis and Co., of Southgate, are some very beautiful varieties, ranging in colour from white to very deep purplish crimson. *C. T. splendens*, a fine large flower of very rich colour, especially the lip, which is beautifully frilled; *C. T. alba*, the delicate and chaste white variety, having only the yellow on the disc; *C. T. plumosa*, *C. T. Lewisiana*, both exceedingly fine and handsome; *C. T. delicata*, with white blooms of good substance, slightly flushed with rose; *C. T. quadricolor*, also very distinct, with large orange blotches in the throat, the front portion of the lip very bright and margined with white, are worthy of note. I noted also in flower some fine pieces of *Cypripedium callosum* in good variety, *C. Exul*, *Lælia harpophylla*, *Vanda tricolor* *Lewisiana*, very distinct, *Odontoglossum Pescatorei*, *O. cirrhosum*, *O. luteo-purpureum*, *Ada aurantiaca*, &c.—W. H. G.

#### SHORT NOTES.—ORCHIDS.

**Lælia purpurata.**—I have a plant of *Lælia purpurata* in flower. It has three fine blooms on one spike, the centre one having four sepals and two perfect lips. Is this unusual with this *Orchid*?—Gus. TROLLIE, *Rosebank, Cape Town*.

**Dendrobium Auguste Victoræ.**—This appears to be very free-flowering and grows to a good height. The blooms are pure white, the lip prettily veined with a pale violet hue, the sepals and petals having a peculiar twist. It was introduced by Messrs. Sander and Co., of St. Albans.—W.

**Orchids from Trewyn.**—I am sending you a few more *Orchids*. *Cattleya Mendeli* I bought in 1892, when imported. It is now showing eight sheaths, two flowers from each sheath. *Dendrobium fimbriatum oculatum*, two flowers of which I am sending, was bought in March, 1890. It has always bloomed well and is in fine flower at the present time.—J. C. WILLIAMS.

## WATER GARDEN IN NEW JERSEY.

THE illustration shows what we call over here a remarkably fine plant of *Victoria regia*. This specimen had twenty leaves in different stages of growth above water, a fine flower and two buds. The seed was started in the greenhouse early in March. The plant was moved to the outdoor pond about the middle of May, from which time till July 4 it had the protection of a sash. The sash and frame were then removed. The first flower opened July 14, and was followed by thirty others in succession, the last one opening October 4. Four flowers were permitted to mature seed, yielding respectively 188, 458, 293, and 569 large, plump, heavy seeds. Unfortunately, three of the young leaves were injured by a severe thunderstorm which passed over this district a few days before the picture was made. The nature of the damage shows plainly on the edges of the leaves. Many of the leaves were 6 feet in diameter, with rims 6 inches high. Will this plant compare favourably with good specimens grown under glass in

length and the leaf 42 inches in breadth. This was by 6 inches larger than any leaf I had previously measured. In my opinion the *N. speciosum* bears the handsomest flower that grows, everything considered.

*Clifton, New Jersey.*

S. C. NASH.

## KITCHEN GARDEN

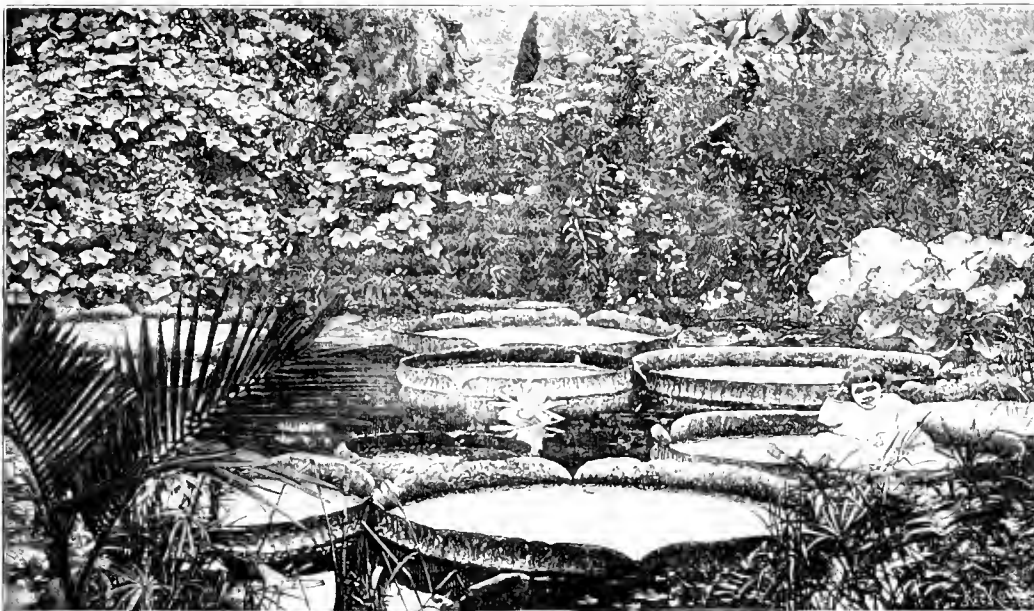
## EARLY MILAN TURNIPS.

FEW can successfully force Turnips under glass, and in heavy clay soils many are afraid to sow early, as the plant runs and much time is wasted. The soil in most gardens this season worked splendidly and there was no difficulty in sowing in March for an early crop in the open, so that with a scarcity of vegetables in spring a few early dishes of Milan Turnips will prove most acceptable. From several years' experience I have found the Milan varieties the

vegetables force more readily. A few dishes of forced Turnips during April are a welcome addition to the somewhat meagre supply of vegetables at this season. Too much heat at the start must be avoided. I prefer to get the bottom-heat from leaves, these giving a slow, but moist heat, and the plants do not run to top. Allow a free circulation of air by the top ventilators or sashes. It is essential to sow thinly and to make a firm bed to assist the plants to bulb freely, as if the soil is too light the plants dry badly and make long useless roots. Moisture is important, and when the plants are growing freely they are much benefited by liquid manure. It is surprising what a lot of useful roots a good-sized three-light frame will produce. Seed sown the first week in February on a mild hotbed will give good roots the middle of April. A depth of 6 inches of soil is necessary, adding burnt wood ashes, bone-meal, or decayed manure if at all stiff or clayey.

For early dishes from the open a warm corner must be chosen. There are few better materials than wood ashes, burnt garden refuse, or the siftings from the potting bench. The more rapid the early growth the less danger of running, and in a light porous soil one can feed freely when the plants have made the third or rough leaf. For outside culture I still rely upon the Early Milan types. Last season these varieties sown on a sheltered border early in March were fit for use the third week in May. Much can be done to forward an early crop by using Bracken or straw hurdles as a shelter at the start. I do not shelter those sown in the open, as the frame roots give us a supply till the early crop on a warm border comes in, but those who do not force may with advantage give shelter in the early stages, and a week or two may be gained by sheltering with branches of Fir of any kind to break the force of cold east winds. For summer use I do not recommend the above varieties; there are better, such as Snowball and Red Globe, the value of the Milan being earliness. If the weather at the end of May or early in June be hot and dry, I find it advisable to lift fully-grown roots and lay them in soil in a cool border.

G. WYTHES.



*A water garden in New Jersey. Engraved for THE GARDEN from a photograph sent by Mr. S. C. Nash, Clifton, New Jersey, U.S.A.*

England? I have often stood on leaves to satisfy doubting visitors. The heaviest person I ever photographed on an unsupported leaf weighed 174 lbs.; add weight of rack (9 lbs.) made of laths, and placed on the top of the leaf to distribute the pressure and protect the web of the leaf from the sharp shoe heels. The total weight was in that case 183 lbs. I vouch for the absolute accuracy of these statements.

I have nearly all the varieties of *Nymphaeas*, or have had them, both hardy and tender. Some I have discarded as not worth bothering with. The only one that proved too much for me was *N. sphaerocarpa* (the Swedish Pink Lily). I have paid as high as 32s. for a small root of this species or variety, but though I have tried several times, I have not succeeded as yet.

*Nelumbium speciosum* does grandly here out of doors. A neighbour of mine planted one tuber of this in a natural pond (about 1¼ acres extent) in 1892. I visited this pond last year in August, and do not hesitate to say there were more than 1000 blooms and buds in sight. At my request he cut the largest leaf we could see. The stem measured 10 feet 6 inches in

best for early use, either for forcing under glass or for a first crop in the open. For some seasons previous to the advent of Early Milan I grew the Early Munich, a purple top variety, somewhat similar to the Purple Milan, but taking a longer time to mature and not so good for sowing under glass. Now there is a white Milan variety, a counterpart of the purple form, but even earlier. Sown under glass in the last week in January the new white variety was fit for table in ten weeks. Many may consider ten weeks a long time, but we had during that period several weeks of very severe weather, so that it was impossible to open the frames, and the plants were a great portion of the time in darkness. I find the Purple-topped Milan quite a week later, and in future I shall depend upon the Early White for sowing under glass, but its earliness may have been owing to position of the beds, one variety having received more warmth than the other. For crops in the open these varieties may be relied upon not to bolt like later kinds. Turnips do well forced if due attention be given in the way of moisture and a free circulation of air; indeed, few

**Tomato Ladybird.**—I believe this medium-sized, handsome fruited variety will take a leading position generally. One grower for market recently told me that he had a high opinion of it, having grown it last season. He preferred it to Hathaway's Excelsior, which had been his sheet anchor for many years and always sold well in the market. Ladybird is not only of good shape and quality, but a prodigious cropper also.—J. C.

**Runner Beans.**—These are rather uncertain if sown early in the open ground, the seed being so liable to rot. For an early picking the best way is to sow in boxes or pans, as advised for French Beans. If sown thinly and brought on in a cool frame they transplant well and soon make rapid progress. When planting a moderate drill should be drawn out, this being filled with light, friable soil, or if this cannot be done, some of a similar compost should be placed on and around the roots at planting time. Sutton's Scarlet is a good early sort, having an especially robust constitution and cropping well, the pods remaining in eatable condition longer than in some varieties. The old Scarlet for general use will still hold its own, well-ripened seed of this variety not being so liable to rot as the larger seeding sorts. Veitch's Climbing is another excellent Bean, which should be grown by everyone, Painted Lady or

York and Lancaster being capital for successional sowings. As a rule the first week in May is soon enough, even in warm sheltered gardens, for sowing Runners in open quarters. Do not bury the seed too deep, rather draw up a little soil round the stems when the plants are a few inches high. The climbing French Beans lately introduced are most useful, especially where difficulty is experienced in obtaining tall stakes which are needed for the ordinary Scarlet Runners. This new type of Bean does not as a rule run higher than from 4 feet to 6 feet, ordinary Pea rods answering well for supporting the haulm. Those who have not given this new type of Bean a trial should by all means do so. If these are sown at this date in the open ground, I would advise forming slight ridges and sowing therein in order to prevent the seed from decaying.—J. C.

**Potato Ringleader.**—I think it was Mr. Molyneux, of Swanmore Park, who, in replying to notes of mine on early Potatoes last year, advised me to give Ringleader a trial for early frame and border work. I took the hint, and do not regret it, as tubers planted in frames the second week in February are now (the same date in April) affording good eatable Potatoes, this having been accomplished in anything but the best of weather. Mr. Molyneux, if I remember correctly, placed it before Sharpe's Victor for earliness and general cropping, and I quite think he was warranted in doing so. Sharpe's Victor will not succeed in all soils. I tried it for two seasons both in frames and on an early border, but the yield was so poor that I did away with it. I fancy it requires a somewhat strong soil.—J. C.

**Sowing Peas in pots.**—The advocates of sowing the seed in pots and planting out the seedlings when 4 inches high have so far the best of the argument this season. For weeks the ground was frost-bound when we should have been sowing the early varieties. By doing so in pots in a cool house the plants grew strongly, and were ready to go out of doors into their permanent quarters as early as the seed could safely be transferred to the soil. Thus a fortnight would be gained, and that is of some consequence in the matter of early Peas. I every year sow a good batch of Duke of Albany in pots, keeping the plants in a cool house or frame. In this way I get good pickings of this Pea early in July. It is not safe to sow seed of the large Marrowfat varieties much before April, at least in heavy, cold, wet soil.—E. M.

**Tomato Early Ruby.**—This, one of the newer varieties I tried last year, is quite distinct. Last season was one of the worst on record for Tomatoes in the open, and though I had some half dozen kinds planted out, there was not sufficient warmth to give a fair test. Under glass this variety did well, the plants bearing enormous crops. It is one of the most prolific varieties I have grown. The fruits are nearly round, quite smooth, and of a rich ruby-red colour, in large clusters, many having ten to twelve fruits in a bunch, and most of them above medium size. The plants fruit freely quite close to the pot or soil, and for pots few varieties can equal the Early Ruby. Plants raised in March had ripe fruit in June.—S. H.

**Profitable Cucumbers.**—Varieties of Cucumbers are so numerous now-a-days that amateurs and others are often puzzled to know which to select from the long list which appears in the seed catalogues. Probably where profit alone is considered, a good strain of Telegraph is hard to beat, but for private gardens where quantity is not the sole object there are several other sorts of great merit. For some years I have grown one called Perpetual Bearer and can recommend it to all who prefer a large, handsome Cucumber. It is a capital bearer and, as its name implies, continues to fruit over a long period. Sutton's Prize-winner is also a grand white-spined fruit of fine symmetry and colour, and carrying a dense bloom. Allan's Favourite finds favour with many, being one of the best exhibition Cucumbers in cultivation. For general excellence that well-known

sort Tender and True would be hard to beat, although it is not everyone who can grow it satisfactorily, as it needs careful cultivation. Daniels' Duke of Edinburgh, although, perhaps, a little coarse, is a long, handsome fruit and a prodigious cropper. The Duke is very suitable for frame culture. The Roebford, a market variety now being catalogued by some as a new Cucumber, but which is not really so, it having been grown by some firms in the neighbourhood of London for some years, is just the sort for amateurs and those who have little space at command, as it will grow when pinched rigidly and fruit at every joint. Of the smaller-fruited section, Lockie's Perfection, Verdant Green, and Purley Park Hero are amongst the best, while for winter work the old Syon House is about the best when obtained true.—J. C.

**Savoy De Vertus.**—Late Savoys are always more useful than the early or small kinds, and in few seasons have large growers who have good quarters of late Savoys had better returns, as during the severe frost in February Savoy Cabbages were plentiful. Savoys are often sown much too early, as when they come into use in September or October there is such a wealth of Coleworts, Cauliflowers and other vegetables that the Savoy is not so much valued. The variety named De Vertus is well worth extended culture on account of its good keeping qualities. It may be termed an improved Drumhead. When sown at the end of April or early in May and planted out of the seed bed before the plants get drawn or weak it is a splendid winter Cabbage.—S. H. B.

**Cottager's Kale.**—Here this has stood the winter better than any; in fact it seems to stand with impunity any kind of weather. By some this Kale is looked upon as too common a vegetable to grow, but our plants, over a yard high, are giving abundance of succulent, mildly flavoured sprouts. The main point in the culture of this and other Kales is to sow early and ensure a free and strong growth by the end of September. It is useless to expect the plants to be serviceable in March and April if the growth is not completed by the time named. That which is made later is immature, and therefore unfitted to withstand the frost. I never cut off the heads of the plants until just before they begin to run to seed, as these afford much protection during the winter.—S. P.

**Forcing Beetroot.**—With the improved types of Turnip-rooted Beet there is no difficulty in providing the table all the year round with roots of first-rate quality. The stored roots at this season will grow out and lose flavour, but a check may be given by removing to a north border and covering with damp soil, thus keeping up a supply. When there is a scarcity it generally occurs through May, when the old roots are exhausted and the newly sown will be some weeks before they are fit for use. This may be overcome by sowing a box of seed in heat in the same way as Cauliflowers, pricking off when large enough singly into 3-inch pots, growing in frames, and when hardened off planting out on a sheltered border at the end of April. The plants soon bulb and are large enough for use in a short time. The best varieties for this purpose are the Turnip-rooted kinds.—G. W. S.

**Dwarf Brussels Sprouts.**—Many large growers do not care for dwarf Brussels Sprouts, and I can fully understand the reason if they supply the market, as size is everything. For late use and for home consumption I certainly advise a dwarf variety, as in our case this season the taller kinds were quite killed; whereas dwarf ones, though much browned, were sound and gave a lot of sprouts. For late use I do not advise early sowing; April is quite soon enough. The most important point in culture is ample space in the seed-bed, planting out early before the plants get drawn. If the plants of many of the Brassica tribe were given more space in the seed-bed and less delay in planting out, there would be hardier plants. I am aware these crops

often follow Potatoes or other early vegetables, and the ground is not vacant at the time. In such cases it is well to thin or transplant, and thus get strong plants. I will only name two varieties, as they are the most reliable, being dwarf, hardy, and valuable on account of their mild flavour. My selection is Sutton's Dwarf Gem and Paris Market, the former invaluable for spring use, and the Paris Market for early winter. Paris Market is much grown near Paris on account of the earliness of its hard, bullet-like sprouts and its compact growth, combined with good flavour. Being a dwarf grower it may be planted at 2 feet to 2½ feet apart in the row. This latter variety will supply the table from November till February, when the Dwarf Gem will continue the supply well into April. For earlier supplies, those who require this vegetable may obtain sprouts fit for table in September by sowing in a frame and transplanting when ready. For early use these dwarf growers are equally good, as they soon mature and the sprouts are not so strong when cooked.—G. WYTIES.

**Frame Cucumbers.**—Plants raised in March may now be planted out in frames, provided substantial linings are provided and the frames are well covered at eventide. Of course a comfortable bottom heat, the result of a bed of leaves well trodden, is necessary, taking care not to plant until all rank steam, if there be any, has dispersed. Place the soil, which should be light and sustaining, in a ridge in the frame some days before planting that it may become thoroughly warm. Make the plants firm, water home with tepid water, keep close until established, shading slightly if flagging occurs, and air carefully for the next month. Close early and syringe lightly on fine afternoons. Amateurs and others who have no means of raising their own plants can at this season always procure them of local nurserymen at moderate charges. Where seed has now to be sown for frame plants, Duke of Edinburgh, Lockie's Perfection, and Perpetual Bearer are all first-rate sorts for the purpose.—C.

**Dwarf Beans sown early.**—Many growers who have a heavy clay soil are placed in an awkward position in sowing seeds for early produce, as, should the season be unfavourable, the crop is much injured by cold in its early stages. To assist the germination of the Bean warmth is necessary, and even after the plants are above ground in wet, clayey soils they frequently turn yellow and refuse to grow, later sowings, with more warmth in the soil, overtaking them. To assist early rooting I have tried various ways. The best plan I found was to throw out the crude or cold soil, making a deep-shaped drill or trench, filling this entirely with spent Mushroom manure, the drill being several inches lower than the surrounding soil. In this the seeds soon germinate, and once the plants start into growth the manure greatly assists them.—S. H. B.

**Early Cauliflowers.**—Having tried several varieties for early summer use, I find Early London one of the best. I always sow in the autumn, sometimes wintering the plants in pots, and at other times pricking them out in a frame, using nothing but straw hurdles for winter protection in the place of lights. Plants raised in the autumn are much hardier than those obtained by sowing in heat in February. The plants so treated are now growing nicely on a west border. Each was planted under protection, as it were, by digging the soil out with a fork as planting proceeded, banking it up on the north side. Others in deep drills between the Asparagus beds also look promising. These autumn-sown plants are not nearly so liable to be eaten off by slugs as those of spring growth.—E. M.

**Protecting early Potatoes.**—Unless the growths of early Potatoes are protected in some way or other at night the probability is that they will be ruined. On open quarters I always use 9-inch or 10-inch flower-pots, these being stood between the rows during the day. It is advisable also to stop the holes in the bottom with clay, or this cavity will admit sufficient frost to blacken

the tops. Dry Braeken or short Oat straw also answers the purpose, although somewhat untidy in appearance. I like to give protection as soon as growth begins to force the soil in an upward direction; I am then on the safe side. The tender haulm can be preserved from frost for a few days—if other work is pressing—by drawing a slight mound of soil over each stool with the hoe, but partial protection is useless, and if once the first growth falls a victim, no secondary growth can produce tubers of a satisfactory character.—J. C.

## ORCHARD AND FRUIT GARDEN.

### RIBSTON PIPPIN APPLE.

PROBABLY no dessert Apple is so well known as this old favourite and more universally grown. Unfortunately, the tree is prone to canker in all parts of the kingdom, and many able men have an idea that the variety is worn out, and that it is only a question of time for it to go out of cultivation. Several of these pessimists who have seen our trees and the large and beautifully coloured fruit they produce

branches, healthy appearance, and fine fruit. Provided there is a free outlet for surplus water and a fairly warm and good soil, I believe that anyone may succeed in growing this splendid Apple to perfection. Where it fails under such conditions, it proves that some constituent necessary for the growth and general health of the trees is lacking. What that particular constituent may be can only be discovered after a series of careful experiments, and then applied as may be deemed advisable. I would also suggest the application of the wash mentioned during the winter, as I think it exercises a powerful influence for good on the trees. Another point worthy of increased attention is the stock upon which Ribston Pippin answers the best. Double grafting undoubtedly produces an excellent effect, employing a strong growing variety of the Warner's King stamp as the stock. Some trees that I saw on a strong soil in this county (Herefordshire) were wonderfully clean and healthy, without a sign of any ailment. Probably much more might with advantage be done in that respect where the above variety is pretty much a failure now.

While advocating the growing of Ribston



*Apple Ribston Pippin. From a photograph sent by Mr. Norman Blake, Bedford.*

have altered their opinions, and I believe this excellent Apple will continue to maintain its popularity in the future in spite of its propensities to canker. The cause of canker is such a debateable subject, that it will be unsafe to enter into that matter now, but I have proved that cankered trees of Ribston Pippin may be practically cured of that disease, more especially if planted on a light, porous soil. About six years ago I found canker setting in somewhat severely on about 200 trees, and I was afraid our Ribstons were doomed; the roots were all near the surface, and so far as one could see the trees (bush form) ought to succeed admirably. After experimenting with various chemical manures to supply a missing element in the soil, muriate of potash appeared to have answered the requirements. At first only  $1\frac{1}{2}$  cwt. per acre was applied, but since then double that quantity has been used with the most pleasing results. In addition to this fertiliser at the roots, each winter the trees have been thoroughly washed with 1 lb. of crude potash and 1 lb. of caustic soda dissolved in 10 gallons of water. Since adopting the above measures our Ribston Pippin trees have formed new bark over the old wounds, and, as a rule, are remarkable for their bright clean

Pippin for home use, I should be sorry to recommend it for market work, as it is too uncertain. Though the trees may bloom most profusely, it seldom occurs that a heavy crop follows. My experience is that only a moderate crop can be reckoned upon, and though the fruit will realise a satisfactory price in the London market, it will not realise anything like the amount per acre that some of our large cooking varieties will make. W. G. C.

**The Apple blossom weevil.**—I thought it might interest you to know that the Apple blossom weevil is now depositing eggs in the small unopened buds in enormous quantities. I have carefully examined several orchards lately and found the major portion of the buds punctured and the weevils continuing the process. If this is general it will be a serious matter for fruit growers.—S. T. WRIGHT.

**Chaumontel Pear.**—On page 257 "Y. A. H." appears surprised that I had a good word for the flavour of the above variety. If the promise on our trees is realised this year, I shall have much pleasure in sending "Y. A. H." a dish for him to test, and I think he will acknowledge the good qualities of the fruit, unless we have a bad season for their ripening. I believe "Y. A. H." was at the Hereford fruit show last November, and if so

he probably noticed the splendid dish of Chaumontel staged by Mr. Ward, Steke Edith Gardens, in his first prize collection of Pears. That grower informed me they were from pyramid trees, and, unless I am mistaken, also stated that the flavour was always good. As Mr. Ward is a reader of THE GARDEN, perhaps he will kindly correct me if in error.—W. G. C.

**Protecting fruit blossoms.**—This will now need attention in most gardens, and as both Peach and Apricot trees are scarce of flower in the majority of places, extra trouble should be taken to protect what there is from the ravages of frost. Single fish netting is of little value as a frost-resister, and when double it is not effectual if sharp frost should occur immediately after rain. My experience is that frigi-domo or tiffany is the only safe material. If it is used of moderate thickness only and sufficiently porous to admit sun and light, it may be allowed to remain down in front of the trees during the day as well as the night, being kept from pressing against the blossoms by means of stout poles let into the ground and securely fixed at the top of the wall. Crops of Pears are sometimes lost from want of a little protection. In unsheltered situations espaliers are difficult to protect, but much may be done towards saving the bloom by fixing between the wires small boughs of Yew or Spruce. J. C.

### CROPS OF GRAPES.

At the present time growers will be considering how many bunches they can leave on their Vines with a certainty of their finishing up well. Some are too anxious to secure a heavy crop and leave so many bunches, that the Vine is strained to its utmost power to perfect the crop, and very often it is unable to accomplish such a feat, thus inflicting a great injury to the Vine. The varieties of Grapes are so different in their strength and productive powers, that what may be a fair average crop on one kind would be an absolute failure on another. Take White Frontignan as a case in point; if it were permitted to carry as heavy a crop as Foster's Seedling or Golden Queen will bear with ease, shanking would be practically certain to set in, and the berries that did not shank would never have the finish and delicious Frontignan flavour which makes this Grape so much appreciated in many places. To get White Frontignan really first-class, I think a crop at the rate of half a pound to each foot run of rod is a fair weight with extra strong Vines and a soil well adapted to the variety. More might, perhaps, be obtained, but even then I believe it best to keep near the weight mentioned, thus avoiding any risks and ensuring a similar crop annually. Lady Downe's Seedling is another Grape that may easily be overdone in cropping, and I have committed errors with it on two occasions; in each instance the wood made was remarkably strong, and great care had to be exercised in tying down the sub-laterals. To check this gross habit, I allowed an extra heavy crop to remain, almost every lateral having a fair-sized bunch, and some bunches of large size. Apparently no harm was done, as the crop in each case coloured up well, but later on the bunches did not keep so well in the Grape room, and the following spring the Vines started irregularly and much weaker, with smaller bunches. Supposing the Vines of Lady Downe's Seedling are moderately vigorous and in good health, 1 lb. of fruit per foot of rod is sufficient, and those growers who expect to have and try to secure the same weight from it as from Black Alicante or Gros Colman are courting failure. With respect to the two last-named varieties, my experience is that no other Grapes will produce such a heavy crop year

after year. With the Vines in good health and planted in a suitable border with the roots thoroughly under the cultivator's control, strict attention to feeding and other important details being also given, Black Alicante and Gros Colman will carry from 2 lbs. to 3 lbs. of Grapes for each foot of rod. For market work they pay better than any other sorts, and of late years I have sold all out by Christmas. Muscat Hamburgh, Madresfield Court, Mrs. Pince and Lady Hutt should not be expected to bear more than 1 lb. per foot of rod; in fact, Muscat Hamburgh will be finer in berry, finish and flavour if that weight is a little less, as it is always somewhat uncertain in colouring up perfectly, and if the weight is at all beyond the powers of the Vines, a foxy hue is sure to be the result. The evil effects of overcropping Mrs. Pince have been recently mentioned in THE GARDEN, and I need add no further remarks beyond stating that my experience agrees with that of the writer's. Muscat of Alexandria is undoubtedly the king of white Grapes when well grown, but to have it perfect in colour a very heavy crop should be avoided. I have had Vines of this variety in a house 15 feet wide that finished up a crop well with an average of over 40 lbs. per rod, but I found that the Grapes failed to keep well in the Grape room after February, while other Grapes of the same sort from Vines not carrying more than half the weight were plump and sound until the end of May. Some of the most lovely coloured and largest berried Muscats that I ever saw were staged in Edinburgh some years ago, and the grower informed me that he attributed his splendid examples to always allowing the laterals to be fruitless between each bunch, or say a bunch on every fourth lateral on each side of the rod. No doubt many would consider the crop a light one, but when such a system combined with high cultural skill can produce Grapes of such remarkable merit, it is worth while to give the plan a fair trial. Mrs. Pearson was recently figured in THE GARDEN, and a well-deserved recommendation given the variety. In addition to the remarks then made it may be stated that, with the exception of Foster's Seedling, I believe no other white variety will produce so heavy a crop of good Grapes year after year as Mrs. Pearson. If the Vines are in robust health, 2 lbs. per foot of rod will not distress them or interfere with future crops provided the feeding is sufficient for requirements. For a long time I considered Golden Queen the most prolific of all white Grapes, but experience has convinced me that it is bad policy to permit this variety to bear more than 1½ lbs. per foot of rod. In some seasons a heavier crop will come out all that could be desired, but in others it will be disastrous. Last year I had one Vine of Golden Queen that was of extra strength, and I left on a big crop of bunches, at least 2 lbs. per foot; everything went satisfactorily until the last swelling, and then the berries became marked with dark lines, or, as usually termed, "muddy," and when ripe the flavour was very inferior. The good old Black Hamburgh is often overcropped, and it is astonishing that it stands so much ill-use so well.

Amateurs who only have a few Vines are especially prone to leave so many bunches on, that it is a marvel the Vines do not utterly break down under the strain. When the Vines are very strong, 1½ lbs. or 2 lbs. per foot can be carried with safety, but with weaker Vines half that weight will be ample. No one can state exactly how many bunches or weight a Vine may carry unless he is well acquainted with the soil, feeding, and skill brought to bear upon their cultivation, as one man may be able to

obtain as much as 4 lbs. per foot of rod of really good Grapes by carefully allowing no wasted energy and a judicious system of high manuring. Another man who has equally as good vinerics and every facility for the growing of Grapes will frequently fail to get 1 lb. of well-finished Grapes per foot of rod through not taking careful observation of the Vines' requirements, and also going over the sub-laterals at regular intervals, shortening back such growths wholesale instead of removing all surplus shoots with the finger and thumb immediately they are large enough to pinch out. I am also a strong advocate for the early removal of all bunches not likely to remain to ripen on the Vines. For many years I have cut off these surplus bunches before the blooming period with gratifying results, and have never had cause to regret doing so. W. G. C.

#### PEACH LEAVES DISEASED.

I ENCLOSE some Peach leaves, and hope you will be able to tell me what is the matter with them and whether the disease is likely to spread to the other trees.—J. McC.

\* \* \* The leaves sent are not diseased—at least, such is my opinion. In all probability only some portion of the branches or, say, one side of the tree is showing signs of debility, and if those branches do not die outright this season they will not long survive. It is the stems that are affected, and it is owing to a deficiency of sap that the leaves are changing to a sickly glaucous hue, little or no further progress being made. When large branches fail in the manner indicated they may as well be cut out at once, as the fruit on them will inevitably drop off. The decay of bark and stem partakes somewhat of the form of canker, and according as sap communication is cut off from the roots the branches will fail. Gumming is sometimes responsible for these occurrences, and strong sunshine pouring direct on the stems is thought by some to injure the bark, slow decay resulting; while faulty stoeks are also blamed for some failures. Whether this cankerous affection is the result of a bad bruise of stem or sunburn I am unable to decide, and can only advise cutting away all dead portions of bark, neatly rounding off where sound, and then coating with clay and manure to facilitate the formation of fresh bark. In any case it is advisable to commence the preparation of a young tree to take the place of that failing, taking care when moving the former in the next or following autumn to give it the benefit of quite fresh loamy soil. Should the other trees give signs of becoming sickly, then there is most probably something seriously wrong at the roots, nothing short of wholly lifting and replanting in fresh fibrous loam to which bone-meal and "burn-bake" have been added, using the latter most freely. This lifting of trees should be done in the autumn after the wood is well matured and before the leaves have fallen. Peach and Nectarine trees pay well for this treatment whether they are in a sickly state or not. Some of the most successful growers give their trees the benefit of a fresh supply of loam every autumn. It should, perhaps, be added that it is a good plan to screen exposed stems from bright sunshine, enclosing them in wooden boxes made to fit them, perhaps answering best.—W. I.

**Strawberry Royal Sovereign.**—I am pleased to see the note at p. 262 by "S. W. F." on the above, as it so fully agrees with my own opinion as to its merits for forcing and good cropping qualities. As regards earliness, I am not able to place it before Noble or Vicomtesse H. de Thury, as I did not place the plants indoors at the same time. From close observation I think it may be termed a first early. The large firm fruits require time to ripen if flavour is the first consideration. I find the flavour excellent, brisk and refreshing. It is

a splendid cropper; the flower trusses are thrown well above the leaves, setting freely. When this variety has been grown specially for early forcing, the runners obtained from maiden plants, it will doubtless prove one of the best early forciers we have. I have not yet been able to give it the same favourable treatment as some of the older kinds, but intend to do so in future.—W.

**Feeding Gooseberry trees.**—Few fruit trees receive less manure than the Gooseberry, so many other things require it, but even with a short supply these trees well repay a little attention. I prefer the spring months to any other time for mulching, as there will then be finer fruits and less trouble with red spider. The Gooseberry suffers badly from the pest named, but a good rouch keeps the roots moist. A good dressing of decayed manure—cow manure—is excellent for light soils. We collect the strawy litter which has done service in covering early crops and place neatly over the surface under the trees, and having plenty of liquid manure, this latter is poured freely over the straw, which prevents it running away and retains the moisture. This is done twice a month.—S. B. M.

**Fig trees.**—It is only now that the full extent of the frost and its bad effects can be seen on Fig trees. In most instances they are in a sorry plight. Even those trees that were protected by Fir branches have all their young wood quite killed; other trees not protected not only have all the young, but much of the old wood killed or seriously injured. As all this dead or dying wood absorbs sap to some degree from the tree, it will be advisable to cut away all such portions at the earliest possible date if not already done, thereby preventing any waste of energy and also inducing the back buds to start into growth more rapidly. Of course no fruit can reasonably be expected this year, but a good foundation for next season's crop can be laid by ensuring an early growth that will be well ripened by the time the foliage falls.—W. G. C.

#### VINES NOT BREAKING.

Will you kindly tell me the cause of my Vines not breaking? I took charge of them last summer. They were covered with mealy bug, and the Grapes were so dirty that they could not be made use of. The shoots were very weak. The house is used as a plant house as well as a vinery and the border is outside. I scraped them rather hard in winter, and scrubbed them with soft soap and Gishurst compound. There are eight Vines in the house; four have started and four have not.—W. J. WRIGHT.

\* \* \* If all the Vines had failed to start I should have been disposed to blame the severe scraping and dressing with soft soap and Gishurst compound for the collapse. Many hard scraped rods, however, annually receive a rather strong dressing without apparently being greatly damaged thereby, and we must look in some other direction for the destructive cause. Vines in a house that has to be used during the winter for plant growing do not, as a rule, get sufficient rest, a weakly, irregular break resulting in most cases. Keeping the house warm enough to exclude sharp frosts for any great length of time is almost certain to excite the Vines into growth earlier than desirable, and directly sap movement commences that portion of the rods outside is very liable to injury from frosts. They ought, therefore, to be very carefully protected, not merely during the winter, but till all danger from severe spring frosts is past. It may be some of the stems were not so well protected as the others, but of this W. J. Wright ought to be the best judge, and I can only write conjecturally. Haybands put on a year or more ago, or not very closely bound together when used last autumn, would not prove sufficient protection against such an extra severe frost as we experienced in the winter, but surrounding them with dry sawdust enclosed by boxes would have saved them. If the outside of the stems is split or burst, frost is to blame, and nothing else. No amount of scrub-



bing or dressing during the winter will wholly rid the Vines of mealy bug, but if what few of the latter that escape are hunted for and destroyed during the early part of the growing season, the cleansing will be complete.—W. I.

#### BEST STOCKS FOR VINES.

I AM obliged to "W. G. C." and Mr. J. Crawford for their answers to my query. No doubt I and, perhaps, many others will greatly profit from their kindly advice. As I have not got Black Alicante I shall be obliged to graft Muscat Hamburg upon the Muscat of Alexandria. Some three or four years ago I planted two new vineries. In the early house I planted Black Hamburg, Foster's Seedling, and Madresfield Court. When I first saw a whole house devoted to Madresfield Court I instantly fell in love with it. It was in the year 1888 at The Dell Gardens of Baron Schroeder where I saw it for the first time.

In the second house I planted Black Hamburg, Madresfield Court, and a few rods of Gros Colman. The early house is just fit for the first thinning; the second house will be in flower in about two weeks. Now allow me to tell you what have been the results with Madresfield Court for the last two years. In the early house the berries were subject to cracking and never got their proper colour. In the second house quite the reverse happened, the bunches as well as the berries being large, with no cracking and of good colour. Now what is the matter with them, why do they behave so differently? Mr. Barron tells us in his excellent treatise upon the Vine that Madresfield Court is an early Grape, best suited for early work and requires less heat than Black Hamburg. The Vines are generally not subjected to a great amount of heat with me, especially from the colouring period onwards.

With Gros Colman I never have good results—even in September the colour is quite foxy. Would it be advisable to plant Gros Colman in the early house, or is there any hope that it will do well in the same house if grafted upon the Muscat of Alexandria?

When I got home some five years ago from my rambling abroad I at once adopted the English system of pruning—I mean the spur system, or, better still, the short spur system. Up to that time everywhere in this country was followed the long rod system, and here and there one happened to see a few rods pruned on the spur system, but upon the long one. I confess as I pruned my Vines to the first spurs I did it hesitatingly, saying to myself, in England there is another climate, probably more favourable to this short pruning than with us in our cold country. But, nevertheless, I did it—at least on the permanent Vines, but on the temporary ones I did not venture doing this.

Last year I pruned my permanent Vines, which in the meantime had reached about two-thirds of the rafter, quite close. Just then an old gardener called upon me, looked over the pruned rods, and said in an admonitory voice, "If you want to get bunches, you must prune to two or three eyes, but never so close as that." R. KATZER.

*Pawlowsk, near St. Petersburg.*

**Apple Pine-apple Russet.**—I believe this is a very old Herefordshire Apple, as a few old trees are scattered about the country, but it appears to be dying out. I have a few bush trees, from which I annually have a few excellent fruit, but after trying this variety in almost every form of tree I have been unable to secure a good crop. This year the prospects are superb, every bush tree being covered with bold fruit buds, and if the season is favourable an excellent crop should be the result. Locally the variety is named the Old Pomeroy, and is highly appreciated by those acquainted with it for its earliness and rich flavour. In its season (end of August and early in September) no Apple is equal to it in this part

for flavour. If it would only be more productive, few Apples would be more sought after. Old standard trees make little growth and in the summer the foliage assumes a yellow tinge, as if in bad health; but bush trees worked on the free stock make plenty of strong shoots, with large, dark-coloured foliage. It would be interesting to know if this variety is more prolific in other places or on a different soil to our light, hot one.—W. G. C.

**Tasmanian Apples.**—These are arriving in very good condition this year, and a portion of the cargo of the *ss. Curaco*, which brought 12,000 cases, was sold by auction, realising prices which are said to be remunerative to the colonial fruit growers, whilst they are decidedly satisfactory to the London consumers. The excellent quality of the Tasmanian Ribston, Cox's Orange, New York, Sturmer, and King Pippins, and of the Scarlet Pearmain, Alfriston, and Prince Alfred Apples is widely recognised. They fetched from 9s. to 16s. per case, coming into competition with the last of the Nova Scotian and Canadian Apples, which are selling at 16s. to 20s. Were it not for the introduction of Apples from the Antipodes, we should have difficulty in replenishing the dessert dishes this year, as there are no English-grown Apples to be had, last season having proved disastrous. The Cape fruit, which was obtainable for about a month, has almost ceased to arrive, and no other source of supply will be available until July, when Lisbon consignments are expected. Until then Tasmanian Apples will practically have sole command of the market.

#### THE MELON.

EARLY Melons have not come on so rapidly this year as they usually do. I generally sow the seed about the first week in January and the young seedlings come on slowly during that month and February; but owing to the continuation of the cold weather the plants made weak growth. There is some difference of opinion as to the best treatment of the plants until they are ready to plant out. The young seedlings should be planted singly into 3-inch pots as soon as the seed leaves have grown to their full size, and the plants should go into the soil almost as deep as the leaves. Place the plants on inverted flower-pots up near to the glass roof where they can obtain plenty of light, which promotes a healthy growth and compact habit. Re-pot them into 5-inch or 6-inch pots as soon as they are ready, and they may remain in these until they are ready to plant out. The best method of cultivating early Melons is to train the growths to a trellis fixed about 10 inches from the roof-glass. The best soil is good yellow loam to which has been added a fourth part of decayed manure. Tread or press this in firmly, and let it be in the heated house a week or so before planting out the Melon plants; by that time the bed of soil will be sufficiently heated, and the plants should be put out about 3 feet apart. The leading growth is trained up to the trellis, and this ought not to be stopped before it has grown to within 18 inches or so of the top. Melons do not require, nor do they thrive so well in rich open composts as Cucumbers, but the soil ought to be moderately rich and the bed made firm. The plants do not require a very large space for the roots to run into. A bed about 2 feet wide and 18 inches deep will be quite sufficient with ample drainage. The base of the trellis need not be very much above the bed of soil. Four to six fruits are a sufficient number to grow upon a plant, and the female blossoms should all be open about one time, say within twenty-four or thirty-six hours of each other. If two or three fruits get a few days' start there is little chance for those that come later. I remember once having to plant a house of Melons where the base of the trellis was over 3 feet above the bed, but I happened to have some 2-foot glazed tiles about 12 inches in diameter, and I filled these with good compost

and placed them on the bed of soil. The Melon plants were planted in the tiles, the roots ran down into the bed, and I had a most satisfactory crop of fruit. The only trouble there is with Melon plants is their tendency to damp off at the neck and the liability of the plants to the attacks of red spider, which is a most troublesome pest, but it can be kept down by daily syringings.

J. DOUGLAS.

**Strawberries and the frost.**—I was as surprised as sorry to read Mr. Wythes's note on the unsatisfactory condition of Strawberries in the open quarters at Syon. Here in South Notts the plants, though slightly injured, do not appear to be at all crippled. There is on all varieties in our garden plenty of old foliage in a green state, while new crowns and leaves are abundant. I am glad to find the Gunton Park seedlings have stood the winter as well as any. This fact strengthens my opinion that these fine Strawberries are destined to become popular market varieties. Some of the newly-raised sorts are all very well in warm, sheltered gardens, but in open fields and ordinary market gardens they are useless. Coupled with a good constitution, the Gunton seedlings, Lord Suffield, Gunton Park and Empress of India, possess the very finest flavour. We are getting some unwelcome frosts now, and should these continue a short time longer the flowers on the earliest kinds will be injured, if not destroyed. What makes one more fearful is the remembrance of the terrible frost of the middle of May last year. In regard to mulching Strawberries in the autumn, I have great faith in the practice, provided short littery material is used. This may be saturated with urine, the strength of which will be washed down to the roots during winter and greatly benefit the crop the following year. Using very rotten manure is, I consider, a mistake, especially on soils which are not of the warmest character, as the manure becomes wet and then frozen, this ruining many of the surface roots, which, of course, are the best.—J. CRAWFORD.

**Peach buds dropping.**—At page 193 I set down what I believed to be the reason of Peach trees dropping their buds. I believe that in many instances bud-dropping is the effect of the causes I have given. That there may be other reasons, I am quite ready to admit. "Peach Grower" and "Wiltshire Gardener" (page 257) give evidence in their writing of being skilful gardeners and have full knowledge of the cultural requirements of their trees. They tell us the young growths have been well thinned out, the leaves kept clean and free from aphid or red spider, and the borders well watered. Borders may be too well watered if Chrysanthemum plants are set upon them for two or three months at mid-winter. It may be well to seek for the evil in the constitution of the variety, and I recollect a case in point. Some twenty-five years ago I was an enthusiast in orchard house culture, especially the culture of Peaches and Nectarines. I must have grown some fifty or sixty varieties and proved them. Amongst others I had a yellow-fleshed variety named Exquisite which bore six fruits the third year from the bud, and these six were good enough to win a first prize against fifty-three competitors early in September. Some of my gardening friends planted it out in their Peach houses, and I do not know any of them who did not regret doing so, and for one reason only: the blossoms did not set well, and the fruit when it was obtained, though large, was not first rate as regards flavour from the planted-out trees. I must say that in the orchard house I had little or no trouble with buds dropping. I found Early Grosse Mignonne to be a very free setter, as "Peach Grower" has done, and the true variety is an excellent Peach. Hale's Early is an excellent early Peach with which I had no trouble, nor had I any trouble with the American variety Alexander or with the very early varieties raised by Mr. Rivers, of which I thought Early Rivers was the best.—J. DOUGLAS.

## TREES AND SHRUBS.

## CARPENTERIA CALIFORNICA.

KINDLY allow just a word of explanation. I imagined from what Mr. Miles wrote to you that, under some special process of Mr. Smith's, *Carpenteria californica* was doing quite well in his hands, and I wanted to know what it was, but I now find from a letter he has been so good as to send me that Mr. Smith's advice was relating to something else. From what Mr. Miles says, I should fancy that his shrub and mine are in very much the same plight, and that there was little more to be done for them than what they have had at our hands. But what a difference does this reveal between the state of things at this time and what it was a year ago! The *Carpenteria californica* was apparently happy enough and on the straight road to present us in early summer with a most glorious picture. Now it is certainly alive—though I was afraid to say as much as that of it at first—but there is no chance of its blossoming this season.

Of course, what Canon Ellacombe says about serviceable precautions in winter is quite correct, and many are the hints he has given me about shrubs, &c., during the last twenty-five years, but on one point in his letter I cannot quite rest in the conclusion to which he has come. It is a very easy thing to say that such and such a plant is short-lived, and therefore its disappearance cannot be helped, there is no cause for regretfulness; but how can my old friend be quite so certain that he is right? In very many cases of this sort I should dissent from his dictum altogether, and if a post-mortem examination were to be held after the decease of some favourite flower or shrub, I should often want, if I were a juror, to bring in a verdict of culpable planticide rather than that of death from merely natural causes. I will give an instance in point. *Fremontia californica* has the reputation of being very short-lived, and I have been myself told as much. For all I know to the contrary the sad experience which I had with it in the year 1893 may have been cited in proof of it. But that is far from being the way in which I should look at the matter. I reproached myself at the time, and I reproach myself still, for letting the most glorious specimen in the whole country slip through my hands as it did. It died here from sunstroke, and if I had been aware of its danger, as I might, and as I think I ought to have been at the time, it would be alive now. So also I am persuaded it is with very many other things which are reputedly short-lived—they are mismanaged, and then we say to ourselves when the worst has come to the worst, it is all very natural. Because of this I prefer to ask questions right and left, and I feel sure that good must result from it. If my garden wall had been painted white at the back of *Fremontia californica*, and if a few handfuls of straw had been tied round the main trunk of the tree, it would have been perfectly happy in all the heat and glare. The omission to do this I put at my own door, and it cost me the finest thing in my garden. The death must be assigned to preventable causes.

Since writing to you the other day I have noticed two more survivals, which are of very great interest to me. *Crinodendron Hookeri* (which I raised from a cutting given to me at Bilton) has apparently pulled through this hard winter, though of course it is cut up a good deal, and *Rosa gigantea* (which was given to me at Kew as a very questionable thing in point of hardiness) is in exactly the same case. The judgment of one of the best gardeners in

the Isle of Wight—Mr. Smith, of Appley—coincides with my own on this head, and if I can make these two things do well—and they cannot have worse terrors to go through in the future than they have already met with in the past—it will go far to compensate me for some great disappointments.

But it is perfectly certain that the Isle of Wight is hit now as it has scarcely ever been before in our time. It will take two years for my rock garden to be again at the point at which it stood last autumn, and only a few days ago a young man who seemed to know what he was talking about told me that he had been wandering a good deal over different counties of England during the last few weeks, and he never saw anywhere such marks of the desolating frost as he found here. The reason for it I take to be this. We have been accustomed to think that we never could have any great cold in these parts, and therefore when it did come we were vulnerable in all sorts of ways, and we were quite at its mercy. But some things have gained when many others have suffered. It is a true saying that what is meat to one person may be poison for another. Never, so far as I can remember, has *Magnolia conspicua* looked more promising than it does now, and instead of being nipped and injured, as is so frequently the case, it will in a few days' time be a perfect picture of the most unsullied white. I have a *Magnolia* of this sort which must be about 12 feet high, I should say, and near it stands another of still greater size. I refer to *Magnolia grandiflora*, of which I am very fond. But what a difference do their cases present! *Magnolia grandiflora* is literally browned from head to foot; it is just as though the hand of "chill October" were on it still, and the ground is littered with the falling leaves. Very soon, I suppose, the branches, which are usually covered with thick glossy green leaves, will be bare and naked under a summer sun. The one of these two *Magnolias* is a sort of representative at this moment of radiant happiness. Being deciduous, it gave no point of attack to the desolating wind and the biting frost. The other is a kind of symbol of disappointment and sorrow; it went on merrily at first and took things unconcernedly as they came, but it has had to pay a penalty of a grievous sort. The winter of 1894-5 has given the worst possible turn to the one of these two trees and the very best turn to the other. We must in a garden take the bad with the good and be thankful that things are with us as they are.

HENRY EWEANK.

*St. John's, Ryde, Isle of Wight.*

P.S.—It occurs to me to mention that *Shortia galacifolia* has been very indifferent to the ordeal we have had during the last winter. Four or five large plants here have been beautifully in blossom in the open air for a month past.

**Bambusa aurea.**—I never saw this grow so luxuriantly as at Send Hulm, Woking. Owing to the late hard winter, the leaves look the reverse of green, of course, but what struck me was the great length to which the sucker-like canes had reached. I measured some 14 feet in height and as thick as an ordinary walking-stick. Being interested in the cultivation of *Chrysanthemums*, I envied such excellent neat sticks, which furnish the best of supports for these rather tall-growing plants. The Bamboos are planted near a magnificent lake.—S.

**Historical trees at Walmer.**—Among the trees in the grounds of Walmer Castle there is an *Acacia* which is pointed out as having been planted by Queen Elizabeth. From its size and

appearance it looks as if it might have been raised from a seed borne by the tree that good Queen Bess is said to have planted, but it can hardly be the original. There is also a Yew which Lord Clive is credited with planting; also a very handsome Tulip tree and a splendid group of Limes which tradition has associated with Pitt and Fox. The Duke of Wellington planted here a cutting from the Willow by the grave of Napoleon at St. Helena, which lived till shortly after Earl Granville became Lord Warden. The tree in question stood in the garden, and there is a Willow in the moat that is said to have been a cutting from it. Lord Granville planted in 1887 a cutting from a Willow planted at Tully Allan by the Comte de Flahault, who had accompanied the Emperor in most of his campaigns and attempted to go with his fallen master in his exile. He was afterwards ambassador to Vienna and London. The clumps of trees in the meadow, as well as those on the beach in front of the castle grounds, were planted by Earl Granville.—W. T. B.

**Buddleia globosa.**—At Send Hulm, near Woking, a very large specimen of this showy flowering shrub has been entirely killed by the frost. This had evidently braved many severe winters, and its inability to live through the late protracted hard weather is one more proof that even in very sheltered positions plants and trees have suffered to an unusual extent. In the same neighbourhood I observed a well-balanced symmetrical *Cedrus Deodara*, about 20 feet high, had the northern side browned as if it had been burnt by fire. As the sun gains power we shall no doubt find many instances like this of damage done by frost.—S.

## GARDEN FLORA.

## PLATE 1011.

## GAZANIAS.

(WITH A COLOURED PLATE OF *G. BRACTEATA*.\*)

THE plate this week represents a very beautiful species of *Gazania* which was sent to Kew by Mr. Gumbleton, of Queenstown, Ireland, in the spring of last year for identification. Mr. Gumbleton received it under the name of *G. pygmaea*, but it seemed so different from that and the allied species in its size and involucre, that I considered it distinct, and described it as a new species under the name of *G. bracteata*, because the outer row of involucre bracts sprang from near the base of the tube of that organ instead of near the top in the form of teeth, as is usual in this genus, for until now the involucre has been considered to afford good specific characters. But later in the season Mr. Gumbleton sent two other forms raised from the same packet of seed which, whilst differing from the form previously sent in their involucre and colour of their flowers, were evidently conspecific with it, and seemed to show that the involucre is not altogether to be relied upon for distinguishing the species, so far as the length and position of the bracts composing it are concerned. This caused me to more closely re-examine the whole of the Kew material, with the result that, firstly, I find the genus *Gazania* is one of the most perplexing a botanist has to deal with, more especially when he has not the opportunity of seeing the plants growing in abundance in a wild state, so that their range of variation may be understood; secondly, that the leaves and involucre, within certain limits, are very variable in what is certainly the same species; thirdly, that the size and facies of the plant, as is the case with several other South African composite, are more or less altered by

\* Drawn for THE GARDEN in Mr. Gumbleton's garden at Belgrove, Queenstown, Co. Cork, by M. L. S. E. Lithographed and printed by Guillaume Severeys.





cultivation. And I am now of opinion that the plant I have described under the name of *G. bracteata*, despite its very much larger size as grown by Mr. Gumbleton and at Kew, is really the same as *G. pygmaea*, under which name it was sent from Natal by Mr. Adlam to Mr. Gumbleton, and *G. canescens* is also the same plant. On the Continent it is known as *G. nivea*, but that plant is described as having crenate-pinnatisect leaves clothed with white wool on both sides, and is no doubt from the western part of South Africa, whilst this one has the leaves usually entire, glabrous above, and is from the eastern part of South Africa, in a district that collectors had not reached when *G. nivea* was described. Therefore, for the plant represented in the accompanying plate I propose to substitute the name *G. pygmaea* for that of *G. bracteata*, under which I previously described it, the following being a brief account drawn up from cultivated specimens of the plant and the two varieties that I have seen.

*G. PYGMAEA* (Sonder, in "Linnaea," v. 23, p. 69). Synonyms: *G. canescens* (Harvey, in Harvey and Sonder "Flora Capensis," iii., p. 478); *G. bracteata* (N. E. Brown, in *Gardeners' Chronicle*, 1894, v. 15, p. 620); *G. nivea* (Leichtlin, in *Höner Illustrirte Garten Zeitung*, 1894, p. 81, f. 21, not of Lessing).—A beautiful half-hardy, herbaceous perennial of tufted habit, with linear leaves that are smooth or somewhat scabrous and bright green above, snowy white beneath, with more or less revolute margins; occasionally a pinnate leaf is also produced. In a wild state the leaves are only 1 inch to 4 inches long, but under cultivation they attain a length of 6 inches to 9 inches. The peduncles are about as long as the leaves and glabrous. The flower-heads are 2 inches to 2½ inches in diameter, the ray-florets being white, without a spot at their base, and striped with purple beneath; the disc is yellow; the involucre is glabrous and scarcely hollowed at the base, its outer bracts sometimes arising near the base and very long, as in the accompanying plate, sometimes arising above the middle and much shorter, or reduced to teeth about twice as long as broad.

*G. PYGMAEA* VAR. *MACULATA* (N. E. Br.).—Leaves smooth above, peduncle and involucre glabrous, the latter hollowed at the base. The flower-heads are about 2 inches in diameter, the ray-florets 1½ lines to 2 lines broad, pale creamy white, with a blackish spot at the base and a dull purple stripe down the back.

*G. PYGMAEA* VAR. *SUPERBA* (N. E. Br.).—Leaves scabrous above, especially towards the margins. Peduncles slightly scabrous. The flower-heads are as large and the involucre hollowed at the base as in the preceding variety, but the ray-florets are 2 lines to 4 lines broad and pure white, without a spot at their base, with a bluish stripe down the back. This form is much the prettiest of the three; the greater breadth of the rays gives a more compact appearance to the flower, and the white being of great purity makes it a very charming and effective plant for rockwork and other decorative purposes. Natives of the Transvaal, Natal, Orange Free State, &c.

Besides the above species, only about four others of this pretty genus of Compositæ have been introduced into cultivation, although several of them are well worth growing, as a glance at the subjoined enumeration of what appear to me to be the best and most distinct species will readily show.

#### I.—ANNUAL SPECIES.

*G. BURCHELLI* (De C., Harvey and Sonder, "Flora Capensis," v. iii., p. 479).—One of the most distinct species of the genus, sometimes very compact, at others with elongate branches. Leaves linear, with revolute margins, entire, or with one to three lobes on each side, not white beneath, very hispid, and the margins beset with white bristles, with which also the apex and lobes

are tipped. Heads 1½ inches to 1½ inches in diameter, yellow, with a purple spot at the base of the rays; the peduncle and involucre more or less hispid or setose, and the tube of the involucre with numerous reflexed, spine-pointed bracts. A native of Namaqualand, Orange Free State and Bechuanaland.

*G. LICHTENSTEINI* (Less., Harvey and Sonder, "Flora Capensis," v. iii., p. 479).—A small and well-marked plant. The stem divides into several prostrate branches, bearing oblanceolate or spatulate toothed leaves, which are quite flat, or with very narrowly revolute margins, and at first covered on both sides with a cottony tomentum, the upper side becoming glabrous. The teeth and apex are bristle-pointed, heads 1½ inches to 2 inches in diameter, yellow, with a dark brown spot at the base of the rays, which are purple beneath. The glabrous tube of the involucre is about twice as long as broad, with short, acute teeth, and the base hollowed out with a sharp edge. Native of Namaqualand.

*G. TENTIFOLIA* (Less., Harvey and Sonder, "Flora Capensis," v. iii., p. 479).—A neat species, in habit like *G. Lichtensteini*, but the leaves are pinnate, with two to six linear lobes on each side and revolute margins, green and scabrous above, white beneath. The heads are very freely produced, but only about three-quarters of an inch in diameter, yellow, with a blackish spot at the base of the rays. The involucre has three to four series of narrow, hard-pointed bracts on the tube and between them is neatly marked with white tomentose lines. The base is broadly obconical, with a projecting rim. Native of Namaqualand.

#### II.—PERENNIAL SPECIES.

A.—Leaves mostly or all pinnatisect, or a few entire.

*G. PAVONIA* (R. Br., *Botanical Register*, v. i., t. 35).—An old inhabitant of our gardens, having been introduced into cultivation about the year 1804 by Mr. G. Hibbert. It is one of the finest species of the genus and much resembles *G. rigens*, but the leaves are mostly pinnatisect, green and smooth above, white beneath. Heads 3 inches to 3½ inches in diameter, rich orange-yellow, the base of the rays marked by a large blackish-brown spot, in which is a blacker spot more or less surrounded by white, the peduncle and involucre covered with soft, bristle-like hairs. A native of the southwestern part of Cape Colony. Synonyms: *Gorteria pavonia*, Andrews, "Botanical Repository," t. 523; *Gorteria heterophylla*, Willdenow, "Hortus Berolinensis," t. 98.

*G. PINNATA* (Less., Harvey and Sonder, "Flora Capensis," v. iii., p. 476).—A fine showy species; leaves mostly pinnatisect, with linear or oblong-lanceolate lobes; rough, with short bristly hairs above, white beneath; peduncle roughly hairy, heads 3 inches or more in diameter, yellow, with a black spot at the base of the rays; involucre roughly hairy, hollowed at the base, the teeth shorter or longer than the tube, acute, or drawn out to a long fine point. Native of the southwestern parts of Cape Colony.

*G. JURINEFOLIA* (De C., Harvey and Sonder, "Flora Capensis," v. iii., p. 474).—A very dwarf and distinct species. Leaves all pinnatisect, about an inch long, smooth above, white beneath, the lobes bristle-pointed and with bristles on the petioles. Peduncles as long as or shorter than the leaves, glabrous. Heads about an inch in diameter, the rays white without a basal spot, striped with purple beneath, the disc yellow; the involucre is glabrous, not hollowed at the base, and has short, ovate, acute, mucronate teeth. A native of the Orange Free State and the district of Colesberg, in Cape Colony.

B.—Leaves about half pinnatisect, half entire.

*G. SUBULATA* (R. Br., Harvey and Sonder, "Flora Capensis," p. 473).—A very fine showy species. The leaves are glabrous on both sides, not white beneath; some are pinnatisect with two to three linear lobes on each side, some are narrow linear and entire. Peduncles more or less setose. Heads 2½ inches to 3 inches in diameter,

yellow, with a blackish purple spot at the base of the rays, which are purple beneath; involucre glabrous, hollowed at the base, the teeth three-quarters of an inch long, subulate, the outer ones ciliate. Cape Colony.

C.—Leaves mostly or all entire.

*G. LONGISCAPA* (De C., Harvey and Sonder, "Flora Capensis," v. iii., p. 474; *Gardeners' Chronicle*, 1883, v. xx., p. 77).—This, which is one of the better kinds, appears to have been introduced many years ago, as there is a cultivated specimen in the Kew Herbarium that was placed there prior to 1867, but it was probably soon lost to cultivation and re-introduced about 1882 or 1883, when it was described by me at the place above quoted. Leaves all entire or with some pinnatisect leaves mingled with them, white beneath, with more or less revolute and sometimes ciliate margins. Peduncle glabrous. Heads 1½ inches to 3 inches in diameter, yellow, with or without a black spot at the base of the rays; involucre glabrous, hollowed at the base, the teeth as long or longer than the tube, subulate, and very finely pointed, the outer ones ciliate. Native of the eastern parts of Cape Colony and Natal.

*G. UNIFLORA* (Sims, *Botanical Magazine*, t. 2270; Loddiges' *Botanical Cabinet*, t. 795).—This species appears to have been introduced into cultivation about 1820, and although not so showy as some of the kinds, is still worthy of the gardener's attention. It is more lax in habit than most species, the branches being somewhat elongated and decumbent. Leaves lanceolate or lanceolate-spatulate, with occasionally a pinnately divided one among them, bright green above, white beneath. Heads 1½ inches to 2 inches in diameter, bright yellow without a spot at the base of the rays, which are coppery purple beneath. The involucre varies from nearly glabrous to white-tomentose, and has short acute teeth.

*G. UNIFLORA* VAR. *LEUCOLENA* (Harvey, "Flora Capensis," v. iii., p. 472).—Like the type, but both sides of the leaves and the involucre are densely white-tomentose. Natives of sandy places near the coast of Cape Colony.

*G. RIGENS* (Sims, Harvey and Sonder, "Flora Capensis," v. iii., p. 473).—This is the oldest and best known species in the genus, and one of the most beautiful. It was cultivated by Miller prior to 1755, and has never ceased to be a favourite with gardeners. The leaves are mostly entire and linear-lanceolate, with now and then a pinnatisect leaf among them, bright green above, white beneath. Peduncles glabrous. Heads 2½ inches to 3 inches in diameter, bright orange-yellow, the rays with a blackish spot at their base, having a white mark in the centre of it; involucre glabrous, with short acute teeth. Synonym, *G. splendens*, Moore, *Floral Magazine*, v. i., pl. 19; *Illustration Horticole*, 1860, v. vii., pl. 235.

*G. RIGENS* VAR. *PURPUREA* (N. E. Brown).—Like the type, but the flower-heads have a blackish-purple disc and rich purple-red-coloured rays, with a black spot at their base. This variety must certainly be a very attractive form, but I have never seen a living specimen and doubt if it is in cultivation, although it is a plant that is well worth introducing. Curiously enough, however, on turning to Miller's "Figures of Plants," v. i., t. 49, I find that it must be this very variety which he figures, although on page 33 of that work, wherein the plant is for the first time described, he states that "the rays are of a gold colour within, but of a pale yellow on the outside. At the base of the rays there is a beautiful circle of black chequered with white, and the disc within the circle is of the same colour as the rays." In the plate, however, both ray and disc are represented of a dark red colour and not at all golden. Possibly the artist depicted one variety, whilst Miller described the common well-known form. Another curious point in the history of *G. rigens* is that the native locality is at present unknown so far as I am aware, for although it has been cultivated for 140 years, no wild specimen of it was contained in the Kew Herbarium until this year, when flowers of the purple variety were received, but

are not localised; nor had Harvey when writing the "Flora Capensis" seen any but cultivated specimens. I have a suspicion, however, that the plant grows either in the neighbourhood of Saladanah Bay or in the district of Tulbagh.

*G. ARMERIOIDES* (De C., Harvey and Sonder, "Flora Capensis," v. iii., 478).—A dwarf compact species, very distinct in character. Leaves linear with very revolute margins, sometimes rolled back to the midrib, rough with short, stiff, ascending hairs, and terminated by a bulbous-based white bristle; the peduncle and involucre densely covered with soft spreading hairs. Heads 1 inch to 2 inches in diameter, the rays white without a spot at their base, purple beneath, the disc yellow. The teeth of the involucre are very variable, being sometimes no longer than the tube, sometimes two to two and a half times as long, and obtuse with a mucronate point or very acute or subulate pointed. A native of the eastern districts of Cape Colony and Natal, at 3000 feet to 8000 feet elevation.

*G. CESPITOSA* (Bolus in "Journal of the Linnean Society," v. xviii., p. 393).—This is perhaps the most remarkable of all the species, although the flowers are not so large as in several of them. Very densely tufted or thick procumbent woody stems. The leaves are very numerous, about an inch long, very rigid, linear, spinulose-ciliate, glabrous. Peduncles short, glabrous; heads  $1\frac{1}{2}$  inches to  $1\frac{1}{2}$  inches in diameter, yellow, with no spot on the rays; involucre glabrous, with a cylindrical tube hollowed at the base and striped with dark purple on a green ground; the teeth are shorter than or as long as the tube, rigid and hard pointed, the outer ones ciliate at the base. This grows on the Sneeuwbergen Mountains, in the district of Graaf Reinet, Cape Colony.

N. E. BROWN.

## THE WEEK'S WORK.

### FRUIT HOUSES.

**PEACHES AND NECTARINES—EARLY HOUSE.**—Early Alexander and other early American kinds will now be swelling freely and should be encouraged by mulching the surface soil and feeding with liquid manures. The earliest varieties are this season later than usual, owing to the dull, cold weather that prevailed when the trees were in bloom. No time should be lost now in going over the trees. Fruits shaded by shoots or leaves should be freely exposed to the sun so as to get good colour and flavour. The early American Peaches require much sun to get flavour, and as many fruits are on the undersides of the trees, they may be freely exposed by removing useless shoots and leaves. Feeding must cease when swelling ceases, and there must be less moisture overhead. A warm dry temperature must be maintained, but I do not advise keeping the house dry, as by damping floors and walls and giving air freely during the day a sweet growing atmosphere is maintained. Previous to ripening it is well to thoroughly moisten the border, as the flavour of the ripe fruit will be affected if watered at that period. The leading shoots, or those required for extension, should be given the best position on the wall or trellis, as these will be better matured if allowed ample space. In regulating the shoots at this date many may be removed if they are at all thick. These early varieties are more difficult to manage than older kinds, and to prevent bud-dropping the best means should be now taken to ripen the wood, this being the best preventive and a safe one. The shoots for next season's bearing that are growing too freely may have the points pinched out, as they are not required too gross, 15 inches to 18 inches being ample as regards length. The lateral growths should be stopped to one leaf as they form, not allowing them to attain any size. It is an easy matter to remove any badly shaped or small fruits at this stage if at all crowded, as there is no fear of dropping now, and

in the case of weakly trees it is well to crop lightly. These latter should be encouraged by supplies of a quick-acting fertiliser well washed into the soil with tepid water afterwards. Strong growing trees may fruit freely, this to some extent checking gross wood. The temperatures for houses in which the fruit is stoning may be raised, a night temperature of 65° to 70° and 10° higher by day, allowing the thermometer to run up freely at closing time, and with warmth in the pipes there should be ample ventilation during bright sunshine.

**SUCCESSION HOUSES.**—The trees in these houses will have been making good progress of late and the fruit should now be stoning. Our best standard Peaches and Nectarines, such as Royal George, Early Grosse Mignonne, and Lord Napier Nectarines fruit freely, but there is no gain by leaving too many fruits, and by early thinning of badly placed fruits, those which are prominent have a better opportunity to swell and attain a large size. Crowded wood and small fruits are not profitable, and are difficult to manage. Shoots with fruit at the base may be made good use of if stopped at a few leaves above the fruit; they act as feeders during the swelling, and are readily removed when the fruits are gathered. The trees do not yet present the neat appearance of the early forced trees with their new growths tied in, as it is well to allow the young growths free play for a few weeks till the wood is firmer and there will be less danger of breakage. The shoots, too, may be better placed to expose the fruits as much as possible. The old system of leaving a large quantity of fruit till the final swelling is not advisable, impoverishing the trees and reducing the size of the fruits left to mature. With ample roots, food and moisture, and freedom from sudden fluctuations of heat or cold, there is little fear of dropping after the fruits have attained a fair size. It is well to leave as many fruits as possible on the upper part of the trellis, but they should be equally distributed all over the trees. Syringing will now be an important point of culture and must be regularly attended to, as green fly, red spider and other pests will increase rapidly, and should black fly make its appearance it is well to remove it quickly by frequently fumigating, dusting the affected parts with tobacco powder, leaving the latter on the trees for a day and then syringing freely. Ample supplies of food are needed when the fruits are swelling, and by change of food much finer fruit is obtained. By giving liquid manure and a good fertiliser alternately there is a great gain, as too much liquid from animals closes up the soil. Temperatures may be slightly raised, but it is well to maintain a low night temperature with all stone fruits till the last swelling or ripening period: 60° to 65° will be sufficient at night, the last named in warm weather with a rise of 10° by day, thoroughly wetting all portions of the trees and house when closing, using water of the same temperature as the house.

**LATE HOUSE.**—Disbudding and thinning will be the chief work in late houses, and as the trees frequently get badly infested with green and black fly, means must be taken to get rid of the pests as soon as the fruits are set by repeated fumigations, not in strong doses, but several nights in succession, giving the trees a thorough syringing afterwards to remove any fly the smoke may not have reached. Many young cultivators use the syringe too lightly, missing the parts of the trees most difficult to reach. These are the parts soonest infested by fly, being most exposed. Late houses should get full air by day and a liberal circulation at night, the top ventilators being left open, but have sufficient warmth in the hot-water pipes to prevent the thermometer falling below 45°. Syringe sufficiently early to get the foliage dry by sunset, and by early syringing the trees grow more freely. After the fruits are set the trees should receive liberal supplies of moisture, and as growth increases food may be given freely. The remarks as to thinning for early houses apply here with more force; as so many fruits set, it is well to thin early. Cases or unheated houses should not be retarded in any way during the

flowering period, but the same attention given as advised above.

**THE ORCHARD HOUSE.**—This house if not hard forced, but used for a variety of fruits, will now require much attention. The trees being in pots with increased top growth will require more moisture, food also, and those who do not re-pot annually will require to feed early and give their trees rich surface dressings as soon as the fruit has set. The Peach and Nectarine will claim first attention, disbudding and thinning being important details. With pot trees I do not advise severe thinning, as in the case of large planted-out trees, as often the fruits drop more when swelling should there be a check in any way. Severe stopping will be necessary to equalise the growth, only leaving sufficient new wood to furnish the trees for next season and for extension, stopping the shoots almost close to the fruit or the bearing wood. In watering these trees give liberal supplies in fine weather, as should the balls once get over-dry, the fruits drop badly and others fail to swell. In syringing see that all parts of the trees are thoroughly moistened. Trees introduced late will need more air and less moisture, but avoid cold draughts, frequently examining the trees, removing useless wood and fruit, and feeding as growth increases.

**CHERRIES.**—These now swelling fast should get liberal treatment, airing freely on bright sunny days, and giving liquid manure or surface dressings of a good fertiliser. Cherries being surface rooters need early mulching with rich food, which feeds and saves the watering. Thinning in the case of fruits well advanced may now take place, as in many houses the fruits have nearly finished stoning and it will now be safe to thin them. Cherries drop up to the time they commence to colour, so that early thinning is not advisable. Keep a sharp look out for black fly, one of the most troublesome pests these trees have to contend with, as when the fruits ripen it is difficult to get rid of it by syringing, so that it is well to keep free of the pest in the earlier stages. Trees with the fruit nearly ripe should have the shoots laid in, these if at all dirty being given a coating of tobacco powder or dipped in tobacco solution. Trees well supplied with water and food are less subject to attacks of insects, and robust trees either in pots or borders take large quantities of water when bearing heavy crops.

G. WYTHES.

### KITCHEN GARDEN.

**PEAS—PRINCIPAL SOWING.**—This must now be made in order that the crop may arrive at maturity before the midweek season sets in, as when growth is late this scourge sometimes clears it off in a very short time. Selection is of the greatest importance in this sowing in order to avoid a glut at one time. For those who are short of ground, I recommend mixing the seed of various sorts and sowing it in the same rows to prolong the supply. Allow plenty of space between each row where practicable, and on heavy, wet soils take out shallow trenches, filling the same with any fairly rich, light soil, applying artificial manure later on rather than digging in animal manure previous to sowing the seed. Stourbridge Marrow, Veitch's Perfection, and the deservedly popular Criterion are excellent, the same sorts being again sown in about three weeks' time—Ne Plus Ultra, Walker's Perpetual Bearer, and British Queen being best sown the first week in June for late autumn supply.

**LATE CELERY.**—Where room can be spared for several, or even one row of late Celery it will be found invaluable to help out other vegetables, especially should the winter be severe and the majority of the Broccoli perish. For flavouring purposes also it may be used, and thus the better blanched samples spared for ordinary use. An ordinary cold frame with a sunny aspect will answer capitally for sowing the seed in, keeping it close till growth is visible, afterwards fully exposing it in fine weather to harden and induce stocky plants. Leicester Red is about the best

Celery to stand a wet winter and general exposure, Standard-bearer and Wright's Grove Red also being very good. As this batch will make the most of its growth at a later date, much manure is not advisable, as it is apt to induce hollow growth and consequent rotting. Mushroom manure dug into the trenches now will be in good condition for the balls of roots by the time the young plants are fit for transplanting. When the seedlings are fit for pricking out frames will not be necessary; any well-sheltered corners where the sun gains admission and where rough boards can be arranged round the plants and mats thrown over at night will answer well. Celeriac may still be sown, the variety called Early Paris being useful as a second dish in winter. The seed should be sown in a little warmth and the young plants pricked out in due time, being finally lifted with good balls and planted in rows from 18 inches to 2 feet apart and 18 inches from root to root, planting in drills in preference to trenches and on the level on heavy soils.

DANDELION.—This is much esteemed in many places where winter salads are in request, the fereed tops forming a pleasant change from Endive and Lettuce. Being perfectly hardy, a portion may be left in the ground all the winter and allowed to come on naturally in spring. If needed in a blanched state small batches should be lifted at intervals and placed in the Mushroom house. That left in the ground can be readily blanched in spring by covering the crowns with Seakale or large flower-pots and covering with leaves.

SALSIFY AND SCORZONERA.—Rows of these may now be sown where they are to grow, the plants being duly thinned out to the required distance as soon as large enough. This crop pays for rich ground, as on soil at all hungry or shallow the roots become tough and of poor quality. The foliage being very liable to the attacks of fly must be watched as soon as through the ground and sprinkled occasionally as recommended for Turnips.

SOWING GLOBE ARTICHOKE.—I am aware that, as a rule, a great percentage of Artichokes raised from seed are worthless, yet after severe winters offsets from established clumps are so scarce, that sowing seed is compulsory. This should if possible have the advantage of a warm, sunny corner in order to hasten on the plants, so that it may be seen during the first season which are worth retaining. Some gardeners sow the seed in pots or pans and pot on the seedlings, growing them in comfortable quarters and afterwards hardening off, finally planting out with the balls intact. Where there is no scarcity of ground a good batch should be raised and planted out for trial 18 inches apart.

PLANTING ASPARAGUS.—In most gardens this may now be done. It should be borne in mind that however much trouble and expense the preparation of the new beds may have cost, failure and disappointment must ensue unless due care is bestowed on the seedlings at planting time. I believe careless planting has much to answer for in the many failures in growing this vegetable. The rootlets are of such a delicate character, that exposure to cutting winds for a few minutes, or even to hot sun, may destroy them. When the roots have to be sent from a nursery, arrangements should be made for packing them in damp Moss or some such material. When home-grown roots are employed, the matter of transplanting is made easier. A calm and, if possible, dull day should be chosen for the job, and, presuming that the beds were prepared at the time advised, the soil will now be nice and firm and need not be trodden. Some still prefer the old-fashioned 4-foot beds, but unless the soil is retentive and cold it is not necessary to raise them above the ordinary level. I get capital results from planting single rows, allowing a distance of 2 feet from plant to plant and a 2½-foot alley between. For the first year or two this space can be utilised for Lettuces. Lift only a few plants at a time, sprinkling the roots and planting carefully with a small handfork. If the compost is not of the best description, work

in a little fine loam and leaf-mould amongst and around the roots. Sink the crowns just beneath the surface, and if the young growths have pushed, draw a little soil over them to protect from frost until somewhat hardened. Nothing more will be needed except keeping down weeds until growth is a foot or 18 inches high, when small sticks should be placed to each plant and the shoots secured thereto, as high winds are very liable to loosen them at the base and sometimes snap them off. This precaution is not necessary the second year. In regard to varieties, Conover's Colossal and Reading Giant are capital for the main cuttings, while the late Argenteuil forms a good succession. On hot soils, if the summer should be dry, a slight mulch of leaf-mould will be beneficial.

SMALL SEEDS.—Secondary sowings of various Kales may now be made, plenty of that absolutely frost-proof variety Asparagus being allowed for, the dwarfier forms also of the Scotch or curly being better for latest supplies than the taller, as they are more easily protected by snow. The old Cottager's Kale is still one of the most useful, as are also Read's Hearting and a variety commonly known as Ragged Jack. Choose a somewhat shady position, as the seedlings will come on quite fast enough, and allow plenty of room between the rows at this date, this being more needful than in the earlier sowings. Couve Tronchuda, or Portugal Cabbage, is a most delicious vegetable, coming in most useful after the latest autumn batches of ordinary Cabbages, and finding great favour in the dining room. It may be sown now and treated in all ways similarly to other green crops.

LATE BROCCOLI.—In midland and northern localities seed may now be sown of the majority of spring Broccoli. In the more favoured counties a fortnight later will be a better date for a few sorts. Amongst reliable kinds may be named Veitch's Spring White, Penzance, Cattell's Eclipse, and the old Leamington. For continuing the supply until the handlight Cauliflowers are ready I find none to equal Veitch's Model, Late Queen, and Methven's June; these, and especially Model, are extremely hardy and of good quality, and being dwarf in growth stand severe winters far better than do the more leggy varieties. Sow thinly and give plenty of room between the rows, finally planting out if possible on plots from which Spinach, spring Cabbage, or other early crops have been cleared, and that without any further preparation of the ground, a solid bottom favouring a stiff hardy growth. If room can be spared for a few rows of the early white and purple Cape they will be found most serviceable at a time when Broccoli is not over-plentiful. These may be planted between rows of Potatoes, a course which should always be avoided with sorts that have to stand through the winter.

PICKLING CABBAGE.—These in common with ordinary spring Cabbages succumbed in many places to the severity of the winter. Where seed was sown in good time in January as advised, the plants will now be sufficiently advanced and hardened to admit of planting in their permanent places. Give extra rich ground, as there will be none too much time for making large solid heads. It is a good plan whenever sowing small seeds to include a small quantity of summer Cabbages, as these fresh and young are always acceptable and can be planted out on any odd plot or corner not large enough for main batches of winter greens. Cocoa-nut is one of the most useful Cabbages for summer sowing, turning in quickly and being of excellent flavour.

VEGETABLE MARROWS.—Seed may now be sown in small pots to produce plants for planting out under handlights or other protective agents in June. Sow a couple of seeds in each pot and select the best plant, moving to a cool greenhouse temperature as soon as growth appears through the surface in order to secure a hardy constitution. Moore's Cream, Long White, Pen-y-byd, and the Custard varieties are all suitable for this sowing, giving good returns when well cared for. If plants sown earlier and intended to be planted out in early Potato frames are likely to become pot-bound before the frames are cleared, give another

liberal shift, using good rich soil, and assist growth by occasional doses of liquid manure, as if once Marrows become stunted and yellow they are practically useless. J. CRAWFORD.

## FLOWER GARDEN.

### THE ROCK GARDEN.

#### V.

APRIL 4.—ROCK PLANTS IN BLOOM.—This week has added two more choice Saxifrages to the plants now in bloom. Saxifraga Boydi is in flower not only at Exeter, but also at Newton Abbot and at Torquay. This little gem very much resembles *S. Burseriana*, but its flowers are of a clear beautiful sulphur-yellow. It is still scarce and a very slow grower. In the various rock gardens in the towns mentioned it occupies the same position, viz., slightly sloping ground fully exposed to the sun, and planted in a narrow crevice containing very stony, calcareous soil, a position which seems to suit it. The other little gem now blooming is *Saxifraga retusa*. Its appearance just now is altogether unique, and it would make a good companion to the first named variety (*S. Boydi*). The leaves are very small and compact, reminding one more of those of *Androsace pyrenaica* than of a Saxifrage. The flowers, nestling on this cushion of dark green foliage, are bright rose with a dark purplish red centre, and stamens of the same colour. These Rockfoils deserve one of the choicest corners in the select part of the rock garden. *Morisia hypogea* was flowering here in January, when six weeks of unusually severe frost set in and the plants were partly covered with snow. It is now, however, continuing to bloom just as if nothing had happened. Gentians are showing as yet only buds here in Exeter, but in a rock garden at Newton *Gentiana verna* is already in full bloom. At Torquay *Rhododendron Vaseyi* is also in flower. This American species would grow too large among the alpine, but in the background of a rock garden it well deserves a place. The flowers, of a bright pink colour, appear before the leaves. In the same rock garden I noticed large groups of *Primula capitata* in full bloom, presenting a charming sight with their large heads of lilac blossoms. Here at Exeter various other *Primulas* have opened out of doors, including *P. nivalis* with pure white flowers, the dark purple *P. intermedia* and the lilac *P. denticulata*. In the rock garden the best place for these varieties would seem to be a partly shaded stony ground. *Shortia galacifolia* is blooming now in various places in Devonshire, looking perhaps at its best in a shady nook of the rock garden at Abbotsbury. *Draba aizoides* is following closely upon *Draba Aizoon*, which commenced to flower last week. At a first glance both resemble each other, but *D. aizoides* is of a deeper golden yellow colour and its leaves are shorter than those of *D. Aizoon*; both seem to do best in a narrow crevice fully exposed to the sun. *Iberis stylosa* flowered in January and is now again in bloom, but its foliage has been slightly injured by the frost, which is not to be wondered at when such hardy plants as *Iberis semperflorens*, *I. sempervirens*, &c., have been cut to the ground by the severe weather.

A very effective plant now blooming is *Corydalis solida*, which is equally well adapted for the larger rocks or for the rocky border. The rosy purple flowers are very showy, and the glaucous, much-divided foliage is equally effective. This is, however, a plant which should

not be planted too close to the smaller gems, which it might injure by its robust growth, although it does not spread so rapidly as the better-known yellow Fumitory, which is not in bloom as yet.

The same position, *i.e.*, a part of the rock garden away from the smallest alpinics, should be given to *Orobis vernus* and *Omphalodes verna*, which are now flowering; the former has Vetch-like lilac flowers of a pleasing shade, those of the latter being brilliant blue. *Omphalodes verna* is an excellent plant for naturalising in a wild garden, where large patches are most effective.

Of Anemones, only two kinds are as yet in bloom here, *viz.*, *Anemone vernalis* and *A. Pulsatilla*, the former with flesh-coloured and the latter with dark purple flowers, and both of peculiar shaggy appearance. *A. vernalis* I find does best in a half-shady position, while *A. Pulsatilla* seems to prefer a moist spot fully exposed.

*Saxifraga Huetti* has also opened its yellow flowers; this is not a plant for the select part of the rock garden, as it spreads too quickly, but where in the rougher and more shady part a quickly spreading, bright green carpet is desirable, nothing could be better.

Of *Androsaces*, only *A. carnea* is out in bloom so far; the bright pink flowers springing from a mossy cushion of greenery are very attractive. It strongly objects to calcareous soil and does best in a half-shady position on almost level or only slightly sloping ground.

Exeter.

F. W. MEYER.

(To be continued.)

### THE ALPINE PINK.

(*DIANTHUS ALPINUS*.)

THIS pretty little Pink is still comparatively rare in gardens, as it is not one of those things that once planted in the rock garden practically



*Dianthus alpinus*. Engraved for THE GARDEN from a photograph sent by Mr. E. H. Lushington, Cobham, Surrey.

takes care of itself afterwards, although in suitable positions it does not give much trouble, but spreads into dense tufts of deep green growth seldom rising more than 3 inches in height. The proper place for it in the rock garden is one sunny and exposed, but where it can have abundance of moisture so that it should be as near the ground level as possible. Although moisture-loving, there must be no

stagnant water in the soil, a good depth of light material—well-decayed leaf soil is as good as anything—from which all excess of water can rapidly drain away being the best. The more exposed the plants are the healthier will they be and the greater the number of flowers. This species is easily distinguished from other alpine Pinks by its dark shining green leaves. The flowers, which appear in June and July, are borne singly on a slender erect stem, but so profusely from flourishing plants as to quite hide the foliage. They are each about 1 inch in diameter, deep rosy purple spotted with crimson. There is a distinct dark zone of colour around the eye and the edges of the petals are fringed. A coloured plate of this plant was given in THE GARDEN of August 30, 1884.

**Pentstemon cuttings.**—At page 158 of the last half year's issue of THE GARDEN will be found some remarks on the treatment of cuttings taken from the *Pentstemon* late in the year. It has been gratifying to me to find even in this unusually severe winter not a single cutting injured, although there was no other covering but a bell-glass. Instead of using a wooden frame with a glass top to cover them as I had intended, I used several bell-glasses of various sizes, from a 9-inch to one only 4 inches in diameter, under which last I found could be placed three cuttings. These cuttings will not put forth any roots until the sun's rays have deeply penetrated the soil; but they remained covered from the end of October last to the 12th of the present month (April), when the bell-glasses were removed for a few hours in the middle of the day. Should the weather become very hot during the next few weeks the soil will be watered and the glasses replaced during the hottest portion of the day. It is of importance not to lift the plants until some of them indicate growth at their points, which will probably not be before the end of May; the best rooted will then be removed to the quarters where they are to remain, and any that have not yet struck, if only just beginning to do so, will be replaced, watered, and have their glasses set over them for a few days to stimulate their growth. The first laterals taken from the *Pentstemon* in early autumn make better plants than those taken at a later date and soon root, but they will need the protection of a frame or greenhouse during the winter, and are never so strong or so good for that purpose as plants which have been raised during the preceding winter in the manner herein recommended.—B. S.

**Daphne rupestris.**—Referring to Mr. Wood's note on the above in THE GARDEN of March 16 (p. 187), I believe that about twenty years ago Messrs. Baekhouse received a considerable consignment of this species, collected in the neighbourhood of Bondone, near Storo, in the Tyrol. It was thought to be a great improvement (as a rockwork plant) on *D. cneorum*, in being much more compact in habit and having larger flowers of a finer and softer colour (rosy pink) and equally fragrant. I do not remember from what authority Messrs. B. derived the name of *D. rupestris*, under which they grew it. I think they were the first to send it out in England.—W. M.

**Scilla sibirica on the Grass.**—We have but few blue early-flowering plants that are suitable for planting on the Grass, which makes this *Scilla* doubly valuable. It is very pretty growing in groups on borders and beds, but far more so when grown in big masses on the Grass. I have this *Scilla* growing in this way under some Lime trees. The Grass being somewhat thin, it thrives splendidly. I planted the bulbs some three years ago, and they improve every year. Some planted two years ago at the foot of a large Ash and under a Chestnut tree are also doing well. I make a hole and drop in two or more bulbs, according to their size. It is a pity the *Scillas* do not flower a week or two earlier, so as to be in bloom with the Snowdrops. Can any reader tell

me whether *Chionodoxas* will thrive in this way? Just now they are lovely in patches in beds and in the rock garden.—J. CROOK.

### ANEMONE APENNINA.

THIS lovely spring flower carpets the ground in the woods of Italy just as the Wood Anemone does in Britain. It grows freely in almost all



*Anemone apennina*. Engraved for THE GARDEN from a photograph sent by Miss A. Worsley, Rotherly Lodge, Clifton.

soils and is to be had cheaply in large quantity, so that that there is no reason why it should not be planted extensively. Only a poor idea of its beauty can be gathered by planting it in little tufts about garden beds and borders, but by putting it in the grass we see it under conditions such as it grows in its native land and which add materially to its effect. There are many spots about most gardens where this Anemone could be planted and left to take care of itself, and after a few years a series of pretty pictures growing yearly in extent and beauty will be the result. We have tried it in many ways and it has never failed. It does not increase quite so fast in stiff loam, but in light, free soils it runs rapidly, and will make a carpet as thick as the Anemone in the woods. In thin plantations where the sun can reach it beautiful effects might be made, and in grass it is specially charming, coming into flower in April, its clear blue stars borne just above the points of the fresh green growing grass. A coloured plate of this Anemone was given in THE GARDEN of August 18, 1894.

### FLOWER GARDEN NOTES.

THE week ending April 13 has been an exceptionally favourable one for outdoor work, and all flower garden operations requiring attention were accordingly rushed along rapidly. The Dutch hoe has been run through all autumn-planted beds of Pinks, Carnations, Violas and the like; also all herbaceous borders, taking particular care in the latter instance not to injure any plants just on the move, and which as yet are barely perceptible. The ground being in capital working order, many autumn-struck herbaceous plants have also been consigned to permanent quarters, either to fill up beds or to be sparingly planted where the remaining portion of the ground is to be presently filled with other things. I found on looking through the clumps of outdoor *Chrysanthemums* of the Desgrange and outdoor early-flowering pompon sections that they are either killed outright, or that the old stools are so erippled as not to be worth saving. The latter have therefore been cleared away, to be replaced with a batch of December-struck plants. The chief drawback to the Desgrange family is their



very formal appearance. They make, however, in flower a bank of colour and are useful for large beds associated with Starworts of somewhat similar height, or, better still, with a broad edging of Pentstemons. All Chrysanthemums being gross feeders, the ground destined for the reception of these summer-flowering varieties should be well prepared. If there are a few more than are required for outdoor work they may be potted on and will be very acceptable for the conservatory or to associate with such things as Fuchsias, zonal and other Pelargoniums, Begonias, &c., in outdoor groups of pot plants.

**BOXING OFF.**—Many boxes were set at liberty with the planting out of herbaceous subjects, and advantage has been taken of this to shift a quantity of bedding stuff from the cutting pots. I like to have rather small boxes, 18 inches by 12 inches by 3 inches being quite large enough to handle with ease, and as plants are never required to remain long in them a lot of soil is not necessary. In making them care should be taken to put the bottom strips fairly close together, not more than an eighth of an inch apart. This may seem somewhat superfluous advice, but it is really an important matter, especially for present boxing operations. A considerable distance between the strips means an enormous amount of drainage in proportion to the size of the box, the water running through them as through a sieve, and a consequent inability to keep the plants sufficiently moist later in the season, given a spell of hot, dry weather and boxes full of roots. It is not advisable to box thickly; sufficient room should be allowed for the free development of the plants. Seedlings and spring-struck cuttings of Petunias and Verbenas if intended for special purposes are the first to receive attention, as, being fairly hardy, they will be among the first to be planted out. The dwarf Ageratum will also require early attention, it being one of the bedding plants requiring a longer season of growth. The culture of Lobelias had in many places been abandoned in favour of the more enduring Ageratum above-named and the different shades of purple Violas, but the advent of Barnard's Perpetual Lobelia has given them a new lease of life, this being not only a great, but, as its name implies, a continuous bloomer. Dwarf plants of tender habit that are likely to be required for carpet bedding where this style of gardening is still practised may also be boxed. I have before referred to the usefulness of home-made frames for hardening off where permanent pits and frames are somewhat scarce, and just notice them again at the present time because a man handy with saw and hammer can, with the aid of a few inch boards and some pieces of quartering, soon put them together. The quartering may be driven into the ground at intervals of about 6 feet and sawn off square at the top at a height of 4 feet for the back and about 15 inches or 18 inches for the front of the frames. The boards can then be fastened on either side the quartering, enclosing a space of about 3 inches, which may be packed with dry Fern, Heather or straw. If no glass lights are available, skeleton lights, stout poles or open hurdles can be laid across the frames, and if a good night covering is put on, no spring frost we are likely to have will find its way to the plants. Any of the hardier type of bedding plants that are still in fruit houses where a rather high, moist temperature is maintained should be promptly removed from thence, or leggy, weakly growth is encouraged that will get badly nipped with the first exposure to cold winds. Before passing from the bedding plants it may be noted that with all things that come under this category the aim should be to secure nice sturdy, stocky plants, because one good plant is worth three or four bad ones. Also avoid undue crowding either in pot, pan or box, and as these get full of roots, water thoroughly when required, giving not a surface sprinkling, but a thorough soaking that will penetrate right through the soil.

**CARNATIONS.**—I am sorry to hear that the personal experience noted in a recent number as to

the border Carnations having come safely through the winter is not a common one, many growers having to chronicle heavy losses. Under these circumstances, unless the loss can be supplied by the purchase of other stock (a rather expensive business if there are many gaps), the best substitutes for the current season will be found in the Grenadin and Margarita types. If these were sown as advised in February the seedlings will by this time be sturdy little plants and may be pricked out into a frame in prepared soil, pushed along as rapidly as possible, and planted out as soon as they are ready. If any Pinks remain in the cutting frame they can be used to fill one or two beds. Some of the newer kinds, as Mrs. Walsh, Her Majesty, Ernest Ladhams and Ascot, throw large and beautiful flowers, which are excellent for cutting. As, however, they are over earlier in the season than Carnations, it is hardly advisable to allow them to monopolise the whole of the beds. They may be planted in large clumps and the remaining portion of the bed presently filled with, for instance, large plants of Fuchsias or Ivy-leaved Pelargoniums, for which the foliage of the Pinks will furnish an admirable carpet.

**FRANCOA RAMOSA.**—Where this is grown rather largely alike for the conservatory and to be presently associated with other things in outdoor groups of pot plants it is advisable in the case of old plants with many breaks to stake them out a bit, so as to secure a good breadth of flower-spikes; also, if a succession is required, to place a portion of the stock on the sunniest shelf of the greenhouse, an earlier development of flower-spike being thereby secured. It should, however, be remembered that while the plants will do with plenty of sun they must have a dry atmosphere and a fair share of air. Anything approaching a moist, stuffy atmosphere is decidedly injurious. The flower-spike will start under such conditions, but the chances are that instead of developing its flowers it will come to a premature ending.

E. BURELL.

Claremont.

## ROSE GARDEN.

### ROSES IN INDIA.

WRITING from Baroda on March 29, Mr. Goldring says as to Roses:—

You ask about Tea Roses here. The general practice here is to bud very low, so that practically you have own-root bushes. Sometimes layering is done, but it is not a general practice to strike from cuttings. Ever since I have been here (the middle of October) we have had Roses in abundance, and just now as the hot season is setting in the bushes are laden with bloom, particularly Maréchal Niel, Lamarque, Celine Forestier, and such kinds. Hybrid Perpetuals, especially the dark kinds, do not do well, too hot and dry for them, but the Polyantha Roses are in their element. I can cut bushels of Roses every morning from one garden alone, the bushes being enormous, some 10 feet to 12 feet through. They grow thus because it does not do to prune out here, for they never lose their leaves; consequently you see the natural habit of Rose growth, which left alone is most graceful in most of the Teas and Noisettes, flinging out long arching shoots laden with bloom. I wish you could see the glorious colour effects we are getting now from the great tropical trees like Bombax malabaricum 50 feet to 70 feet high, covered with brilliant red flowers like single Camellias; also the Butea frondosa, vivid orange-scarlet pea flowers in dense masses, and the Poinciana regia, which when you see it for the first time in a mass takes away the power of speech. Such effects as these should be aimed at in English gardens, and, taking the hint from Nature's grouping, I am planting groups of 100 or more of the biggest trees, which in a few years will be a glorious sight. The present time is the beginning of the

hot season, and corresponds with our spring at home, when the trees that lose their leaves annually drop them and re-clothe themselves in a week, and in most cases throw out blossom at the same time, though the ground is parched and dry to a considerable depth.

I wish I could bring you photos of some of the splendid colour effects we get from climbing plants: some climb to the top of the biggest trees and then fall over with a dense curtain smothered with bloom. That lovely Thunbergia you figured recently behaves like this. It is quite impossible to realise what those glorious stove climbers here are from what they are under pot culture.

**A new Rose.**—Mr. Jackson Dawson, of the Arnold Arboretum, has produced from a cross between Rosa rugosa and R. Wichuriana a Rose which trails flat on the ground, with very thorny wood like rugosa, and with rugosa foliage in form and colour, with all the gloss of Wichuriana and flowers 3 inches across, of a fine light red. It is sure to be very useful in many situations. This is, I think, the first time it has been described. I consider it the most interesting Rose raised in this country for some time.—F. L. TEMPLE.

**Rose Her Majesty.**—This grand exhibition Rose has two faults, namely, the blooms are too large and they are extremely few as a rule. But to avoid these failings at Broad Oaks, Byfleet, Mr. Carpenter has a plan which I had not previously seen adopted in the case of this variety. It is well known to produce a few (generally a very few) shoots of extra length during the season. Now if these shoots be pruned in the ordinary way the results are those complained of above. The practice then is to peg the growths down nearly their whole length, only just removing the unripened points. Mr. Carpenter assured me that it is not at all uncommon to obtain a couple of dozen magnificent flowers from one plant by adopting this simple plan. It seems to me a way that might well be followed this season if the pruning has not already been done.—H. S.

### NOTES ON ROSES.

It is some years since our Roses were so backward as at present. Last year on April 17 my neighbour was able to cut a respectable bunch of Rôve d'Or, Gloire de Dijon, and Reine Marie Henriette from a sheltered wall. In 1893 my notes show that he cut the same on the 20th of the same month. This year growth is not more than 3 inches to 4 inches in length upon the same plants. These plants are on a south-west aspect, and consequently protected from the keen north-east wind prevailing as I write. I think this by far the best position for early Roses; they miss the keen winds and also escape too bright and early sunshine upon frosty mornings such as we have lately been experiencing. The great contrast between this season and last is most remarkable, and we are not likely to have growth forward enough to be injured by May frosts as was the case both in 1893 and 1894. It is sad to note the havoc caused by frost here in the south, yet I understand that once more Messrs. Cocker's Aberdeen Roses have escaped much injury, although they were unprotected. Surely they did not have the same severe frost as we registered, or else they were fortunately protected by a good layer of snow. It would be interesting to know if this was the case. Last year we had many insect enemies during April. Both maggot and fly were prevalent in 1893 and 1894 at this date, but I fail to see any at present. I do not believe a hard winter makes much difference to insect pests, and no doubt they will appear in due course. Referring once more to notes of previous years, I find that my maidens were staked and tied over once at this date in 1893 and 1894, but now it is difficult for an inexperienced hand to realise that there is a crop upon the ground after stocks have been cut back. In this district we never had worse prospects than at present. I am indeed sorry to hear that the Rev. Foster-Melliar's

standard and half-standard Teas have suffered even more than my own, where I fear not ten per cent. are alive, this including old and maiden plants and dormant budded stocks. Year by year we see the better plan is to grow our Roses as dwarfs in all possible cases. R.

#### SHORT NOTES.—ROSES.

**Rose Boieldieu** has not been good for several seasons now. We saw it at its best in 1887 and 1893, as it likes a hot and dry summer. It is not a Rose I can recommend for general culture, but it is sometimes so good that one hardly cares to discard it from a fair-sized collection.—R.

**Rose Dr. Grill** does not become known so widely as I should have thought. It is strange how here and there a good Rose seems to slip many growers. Nothing can be prettier or more useful in all ways than this, with its soft rose and beautiful coppery shading. *Dulce Bella* I have no doubt is synonymous with this.—R.

**Rose Mme. de Watteville under glass.**—This is coming good with me under glass this season. It is one of the very sweetest scented Roses grown and every bud is perfect when under cover. To get large flowers they need very severe thinning, but I prefer such sweet-scented and uniquely shaded blossoms in quantity.—R.

### STOVE AND GREENHOUSE.

#### HYMENOCALLIS SPECIOSA.

THE accompanying illustration will be at once recognised as an old occupant of our stoves, long known under the name of *Pancreatum speciosum*, but now included in the genus *Hymenocallis*, to which, indeed, all the other plants generally cultivated as *Pancreatiums*, with two exceptions, belong. These two are the hardy *Pancreatum maritimum* and *P. illyricum*, while the other *Pancreatiums* proper are of little value from an ornamental point of view. The reverse, however, holds good with regard to the varieties of *Hymenocallis*, every member of which is well worthy of cultivation.

*H. SPECIOSA*, herewith shown, was introduced into this country from the West Indies in 1759, so that it must be considered among the oldest of our stove plants. Unlike many bulbous plants, it is decidedly handsome at all seasons, for the rich green massive foliage is retained all the year round, and when crowned with its head of pure white, deliciously fragrant blossoms, it will commend itself to everyone. The plant grown under the specific name of fragrans appears to be the same as *H. speciosa*. Apart from its beauty as a specimen the flowers are also much appreciated when in a cut state.

*H. MACROSTEPHANA* is a very beautiful plant of doubtful origin, that has long been particularly well grown at Syon House. Of this a coloured plate was given in *THE GARDEN*, July 10, 1880. The leaves of this are longer and narrower than in the preceding, while the flowers are particularly striking by reason of the large funnel-shaped cup, which tends to convey the impression that it may be a hybrid between *H. speciosa* and *Ismene calathina*, as has been suggested by Mr. Baker. At all events it is a thoroughly good garden plant, and one whose flowering season is not limited to any particular period of the year.

The two named above are undoubtedly the best of this section, but the list is by no means exhausted, as in addition we have

*H. CARIBBEA*, with long, rather thin leaves and flowers, after the manner of, but less showy than those of *H. speciosa*.

*H. LITTORALIS*, too, is somewhat in the same way, but with longer flowers. The segments, however, are very narrow, but when the flowers are borne in large heads it is certainly ornamental. Some few years ago immense numbers of

this were imported by some of our nurserymen, and barrels full of bulbs could be purchased at the London auction sales, but it was by many quickly discarded on the ground that, as far as its ornamental qualities are concerned, it was greatly inferior to *H. speciosa* or *H. macrostephana*.

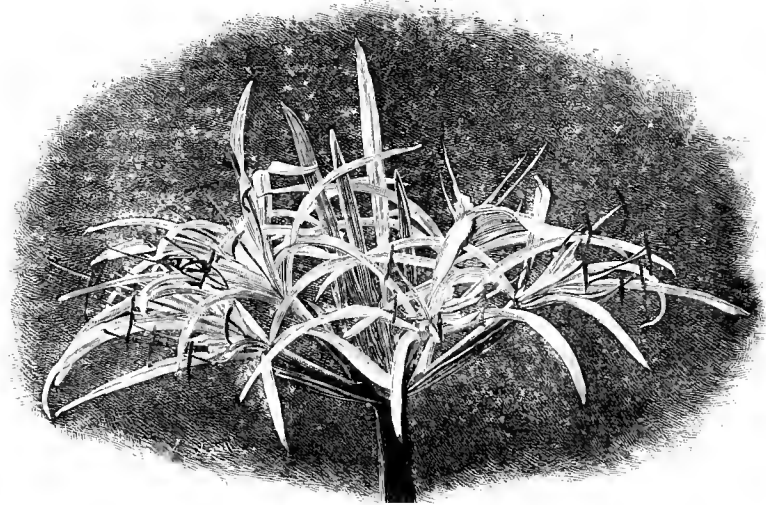
*H. HARRISIANA* is a pretty little species that will do well in the greenhouse or even in a frame. It is a native of Mexico and was introduced in 1846. Apart from the fact that it is more hardy, this species differs from the preceding in being deciduous.

*H. GUYANENSIS*, introduced about ten years ago, is remarkable from the long drooping segments of the flower being spirally twisted, thus rendering it very striking. Some individuals are, however, in this respect more pronounced than others.

The culture of these different species of *Hymenocallis* is not at all difficult, and some of them (*H. speciosa* especially) will stand for years in the same pot and flower well. Hence particular care should be taken when repotting to see that thorough drainage is ensured, and also to use a compost that will remain sweet a long time. Good turfy loam, lightened according to its consistency with peat or leaf mould, and sand will suit them well, while as the pots get

earlier stages is somewhat straggling. With age, however, it becomes more compact, and is so free-flowering, that the Kew plant is quite a mass of its magnificent blossoms. It is by some urged against this class of *Rhododendrons* that they do not remain so long in bloom as many other subjects, which is certainly true, yet they are so grand when in flower, and in the case of some of them so deliciously fragrant, that when at their best they are unapproachable by any other class of greenhouse shrubs. If planted out and allowed to assume the character of good sized bushes, these *Rhododendrons*, when at their best, are very fine.—H. P.

**Hæmanthus Kalbreyeri.**—This, which is by most authorities considered synonymous with *H. multiflorus*, it still frequently met with under the specific name of *Kalbreyeri*, and during the present season I have noted it several times in fine condition. A well-flowered example is when at its best a really charming object, the globular flower-head, composed of a vast number of blossoms, being most brilliantly coloured, and very unlike anything else that we have in our gardens. Unfortunately it does not, as a rule, thrive under cultivation, and the massive heads of blossoms are in most cases, at least, produced by freshly imported plants, as the majority quickly go back



*Hymenocallis speciosa grandiflora.* Engraved for *THE GARDEN* from a photograph sent by M. C. G. Van Tubergen, Jun., Haarlem.

full of roots liquid manure will be of service. One prominent feature in connection with these different species of *Hymenocallis* is that, unlike many other bulbs, they can with ordinary care be depended upon to do well and improve year after year. Of *Pancreatiums*, the pretty *P. illyricum*, a native of Southern Europe, was well shown in *THE GARDEN*, September 6, 1890. Both this and *P. maritimum* can during the winter be obtained at a cheap rate from bulb dealers. H. P.

**Rhododendron Forsterianum.**—This *Rhododendron*, now flowering most profusely in the temperate house at Kew, produces the grandest blooms of the many white-flowered hybrids that we have in our gardens. Most of the varieties here grown have been raised in this country, but *R. Forsterianum* was obtained by M. Otto Forster between the Moulmein *R. Veitchianum* and *R. Edgeworthii*. As might be expected from the crossing of two such grand flowered species, the blooms of this are very large, crisped at the edges, but not to the same extent as in the best forms of *R. Veitchianum*, while the yellow blotch on the upper portion of the interior of the flower is more in the way of *R. Edgeworthii*. The foliage is about intermediate between that of the two parents, while the habit of the plant during its

after their first season in this country. Under the specific name of *Kalbreyeri* this was figured in *THE GARDEN* November 15, 1879, about which time or a year or two later vast importations were disposed of in this country, so that it was for a little while very generally met with. A coloured plate of a second species—*H. coccineus*—was given in *THE GARDEN* July 15, 1893. This, which flowers in the autumn after the leaves have died off, is, unlike the last, very amenable to cultivation, and is a good greenhouse plant.—H. P.

#### OLD PLANTS OF CROTONS.

I HAVE a number of very large and old *Crotons* here. Could I moss the stems, as in the case of *Dracænas*, with any hope of succeeding in getting them to root, or could you suggest a better way?—A. C.

\*\*\* A deal would depend upon the condition of the plants. I have had to do with such plants and managed to overcome the difficulty. One variety dealt with was *C. variegatum*, which for several years had grown on and on until it was a straggling plant; the only remedy at a glance would have been pronounced to be that of severe pruning. To do this, as in the querist's case, would have been inadvisable, because within three months the plant in question was wanted for

exhibition. A stout iron hoop about 3 feet in diameter was fixed just above the rim of the pot. Tying was then commenced without adding any more sticks than those already inserted to hold the hoop. The shoots being long were easily twisted down, overlapped or intersected, and in due course, by the use of string only, a very shapely pyramidal specimen was built up, which when finished could scarcely be recognised as the former plant. Old Croton wood such as that in the plant in question will bear a lot of twisting about, almost like that of a Willow bough, the splitting of the joints being guarded against as a matter of course. If the plants that it is now desirable to deal with are such as the one just described, it will be a very good way out of the difficulty. A well-furnished pyramidal plant of a Croton presents in my opinion a far more attractive form than the dense bush plants so often seen. Possibly the plants in question may be very tall in proportion to their width; if so, the pyramidal form, but of less diameter at the base, can still be adopted. Again, if quite bare below, so that it would not be possible to furnish the bottom, a kind of standard or semi-standard form could be worked out. The long, narrow-leaved Crotons make beautiful standard plants. In one or other of these ways it would thus be possible to make good use of the best of these old plants unless they are quite beyond such manipulation as that suggested. Even if the best plants were so treated it would be a point gained; then the others could be partially pruned if not too bad, or severe pruning, if that be the case, could be practised, so as in due course to so overcome the difficulty of being "an eyesore." The pruning if done should be attended to at once, first letting the plants dry up at the roots so as to prevent in some measure the bleeding that must ensue.

It would be a doubtful process to try to restore the plants by binding Moss around the stems, but any likely looking shoots for cuttings could be so treated, first notching the stem below and afterwards gradually severing it. This is a very good mode of increase where there is no bottom-heat at command to ensure rapid root-action, as when the ordinary means of increase by cuttings is adopted. Although not stated in the letter of inquiry, it is just within the bounds of probability that the plants are overpotted. If this be the case, it might be stated that the old balls may be reduced with safety; such a treatment would greatly help in course of time to restore the plants to health and vigour. Meanwhile, by paying every attention to young stock worked up from the old stools it will not take a great length of time to have sufficient of these to gradually replace the worst of the old plants.—PLANTSMAN.

## SOCIETIES AND EXHIBITIONS.

### ROYAL HORTICULTURAL SOCIETY.

APRIL 23.

No previous exhibition in the Drill Hall has been so interesting as that held on Tuesday last. It is pleasing to record an excellent attendance of Fellows and others by whom the exhibits were evidently greatly appreciated. The hall was filled to its utmost capacity in every part, leaving none too much room for the inspection of the productions. Such a show as this held in the society's own gardens at Chiswick would be in congenial surroundings, but the exigencies of the times tend rather towards bringing the products as near as possible to the visitors rather than the latter taking a journey to inspect them, as in the old days of Chiswick, the gardens of which have possibly never been visited by one half of the present Fellows.

Every department was fully represented on this occasion both as regards hardy flowers and tender exotics, the former being in greater numbers. Of these hardy flowers, the Daffodils were staged in surprising variety and of the best possible quality,

the colour in several instances seeming to be richer even than usual; hardy Primroses and species of the Primula were likewise staged in large numbers. Most notable of the Daffodils were the large collections from the trade growers, Messrs. Barr and Son and Mr. Thos. Ware, and from such well-known amateurs as Rev. Mr. Engleheart and Mr. Bourne, the former with his own seedlings and the latter with the choicest named kinds in commerce. A most worthy and instructive exhibit came from the Hardy Plant Nursery, Guildford, comprising Primulas of several species with other early flowers, including alpinas; these were set up in a really artistic and natural manner amid pieces of stone, the mossy Saxifrages thus showing to the best possible effect, the whole forming an example that many conservative exhibitors of the old type would do well to imitate. The Primroses shown represented the finest forms from such well-known raisers as Mr. G. F. Wilson and Mr. R. Dean, than which nothing better could be desired. The Auriculas are always in strong force at this meeting, but the impression given was that no real advance is being made. Roses were exceedingly fine, never better in April; not less than thirty large boxes came from such well-known growers as Messrs. F. Cant, Mount, Rumsey, and Walker; whilst of plants there was a grand bank from Mr. Rumsey and a smaller collection from Messrs. Paul and Son. Mr. H. B. May had Crimson Rambler Rose in good form, also one of his characteristic exhibits of Ferns. Amaryllises again came from Messrs. B. S. Williams and Son, representing their excellent strain; whilst from Waltham Cross Messrs. W. Paul and Son sent examples of Evergreens and Coniferae showing the effects of the recent severe winter. The exhibits before the Orchid committee were again numerous, both Chelsea and St. Albans contributing choice groups to the display; whilst several botanical curiosities came from Tring Park and Burford Lodge. The one Orchid in strongest force was no doubt *Cattleya Schroderei* in several exhibits, but of *Cypripedium Rothschildianum* (or otherwise *C. Elliottianum*) there were some fine examples contributed. The labours of the fruit and vegetable committee were again light, the best exhibits being the vegetables and early Grapes from Syon House, first-rate examples of table produce, and the Radishes and Kales from the Reading firm. The first Melon made its appearance in The Countess, a splendid-looking fruit for so early in the season.

#### Orchid Committee.

First-class certificates were given to—

**LALIA-CATTELEYA EPICASTA** (*Cattleya Warscewiczii* × *L. pumila*).—This, beyond doubt, is one of the most chaste and beautiful bi-generic hybrids yet raised, the growth quite intermediate; so also is the flower, the sepals and petals of which are of a deep purplish mauve, the former being in a measure narrow, but the latter, on the other hand, very broad. The labellum is tipped with a much deeper shade of the same colour, almost bordering on that of pure purple, whilst the inner portion has a broad base of creamy white. From Messrs. J. Veitch and Sons, Royal Exotic Nursery, Chelsea.

**CATTELEYA CITRINA**, which, to the surprise of a great number present, had not previously received this well-merited distinction. The example in question was an excellent one, both from point of variety and cultivation, having two large, massive blooms of rich lemon-yellow colour deliciously perfumed. This *Cattleya* comes from Mexico, having been introduced as long ago as 1838. From Mr. H. Grinling, Harrow Weald, Stanmore.

Awards of merit were given to—

**DENDROBIUM FIMBRIATUM SUPERBUM**, in every sense a markedly superior form of this species both in respect to the richer shading, tending towards deep buff in the sepals and petals, whilst the labellum was also not only larger, but of a deeper shade, having also the beautiful mossy fringe strongly in evidence. From Mr. G. Marshall, Claremont House, Grimsby.

**LYCASTE TRIFOLIATA LEHMANNI**.—A singular, yet pleasing form with greenish white sepals, the petals nearly pure white, the lip being deeply fimbriated. The plant shown bore several flowers. From Messrs. W. L. Lewis and Co., Southgate.

**CYPRIPEDIUM GOWERIANUM MAGNIFICUM**.—A very fine form of the type, itself a hybrid closely allied to *C. Lawrenceanum*, which it much resembles in contour and growth, having the dorsal sepal veined with maroon on a vinous purple ground and margined with white, the petals being densely spotted with maroon on a pale green ground, thus pointing to *C. Curtisi* as its other possible parent. From Mr. F. Hardy, Ashton-on-Mersey.

**DENDROBIUM HILDEBRANDI**.—A new species from Burmah with the lip as its chief feature, this being of a clouded sulphur-yellow tinged with green, the same shades, only paler, running into the sepals and petals, which have a faint tinge of purple on the reverse, but are otherwise white; the flowers are of medium size, the growth strong, sturdy and erect. From Baron Schreder's collection, The Dell, Egham.

Botanical certificates were awarded to the following: *Habenaria Bonatea*, an interesting if not beautiful Orchid with pure pale green sepals and petals, and a white lip four times divided, the spike being stout and erect; from Messrs. F. Sander and Co., St. Albans; *Polystachya Ottoniana*, a very pleasing plant of quite miniature growth, bearing a profusion of small white flowers with traces of pale purple, each bloom appearing, as it were, to be inverted; from Sir Trevor Lawrence's collection; *Masdevallia fragrans*, which may possibly only prove to be an older species under a different name; the flowers are of a pale greenish-yellow and decidedly fragrant; from the same source as the last; and *Lycaste gigantea*, with large greenish-yellow flowers and a snuff-coloured lip, deeply fringed; from Mr. Walter C. Walker, Winchmore Hill, N.

Messrs. J. Veitch and Sons had an extensive group, which consisted of several of their own choice hybrids as well as other good things. *Odontoglossums* were represented by *O. cirrhosum*, of which a very fine example with three dense spikes, bearing as many as eight branches to each, being covered with flowers (worthy of a cultural commendation); *O. hastilabium*, with a tall branching spike, in excellent condition, and *O. Pescatorei*. *Oncidium concolor*, one of the best of the dwarf species, had three good spikes. Of *Cattleyas* there were *C. Schroderei*, rich in colour, *C. Schilleriana*, a lovely dwarf species, very distinct, and a good form of *C. Trianae*. *Lalia Cattleya Epicasta* has been described. *Lalia Latona* was again shown, being, if possible, of a richer shade of orange-yellow. *L. purpurata* was also staged in good form, also *L. Schilleriana*, a species seldom seen; it has large flowers with white sepals and petals slightly flushed, the lip being bright purple, the growth tall (this must not be confounded in any way with *Cattleya Schilleriana*, which is quite distinct). Of *Cypripediums* there were *C. ciliolare*; *C. Creon*, with dark lustrous flowers; *C. Haynaldianum*, a very distinct and well-defined species, with many flowered spikes; *C. Brysa*, after *C. Sedeni*, but larger and of distinct colour. Of *Masdevallias* there were to be seen the original and true *M. coccinea*, which later on was known as *M. Lindenii* of gardens; *M. Veitchii* with large blooms, and *M. ignea* in profuse flower. Other good things comprised a lovely white *Cattleya Mendeli* with the labellum comparable to *C. Mossiae Reineckiana*; also *Dendrobium Phalenopsis Schroderei*, with deep vinous purple flowers, and *D. crepidatum*, the deep golden lip of which was very conspicuous. *Maxillaria Sanderiana* bore two very fine flowers and as many buds (a sturdy plant). *Cymbidium Lowianum*, with the good old *Oncidium ampliatum majus* were also sent (silver Flora medal). Messrs. F. Sander and Co. had another choice and varied group, comprising a grand plant of *Dendrobium Auguste Victoriae*, a species from Northern Guinea, of tall majestic growth, bearing several erect, many-flowered

spikes of white flowers; *Dendrobium thyrsoflorum*, bearing very dense spikes of deep colour; *Epidendrum nemorale*, a charming and very distinct species with large pale rosy lilac flowers densely clustered at the apex of the spike; *Thunia Brymeriana*, with the purest possible white flowers, the lip bearing faint lines of pale lilac, the plants very robust. *Odontoglossum crispum*, two very superior forms, void of spots, but faintly flushed with pale rose, the sepals and petals broad; *O. crispum roseum*, a well-defined variety with a deep rosy suffusion; *O. cirrhosum*; *O. hystrix nobile*, with large blossoms of fine form and colour; *Cypripedium macrochilum*, bearing two grand blooms; *Odontoglossum Pescatorei*, a pure white form; *O. triumphans*, of large size and deep colour; *Cypripedium macropterum*, a hybrid, showing traces of *C. Lowianum* or *C. hirsutissimum*, were also sent. *Oncidium Rogersi*, *Masdevallia Veitchii*, *Oncidium sarcodes*, *Cattleya Schroederæ*, *Cologyne Dayana* with two long spikes, *C. tomentosa*, a distinct species with terra-cotta coloured sepals and petals, and *Lælia-Cattleya Frederick Boyle*, a pleasing hybrid with white sepals petals and the lip lightly veined with rosy purple, were also included (awarded silver Flora medal).

Messrs. W. L. Lewis and Co. also exhibited a large and excellent group, which comprised several well-developed varieties of *Lælia purpurata*, both light and dark coloured, showing considerable variation; *Odontoglossum triumphans*, of which a grand form was staged with large massive blooms of dark colour, the sepals and petals unusually broad; and *O. luteo-purpureum*, a good variety of which was included. *O. crispum* was represented by a pure white variety with beautifully fringed flowers. *O. Andersonianum album* and *O. Pescatorei Lewisi* were both capital varieties of the types, the latter being void of spots on the sepals and petals, but with unusually dark markings on the lip. The good old *Leptotes bicolor* was in capital condition. *Cattleya Lawrenceana* and *Lycaste inodora* were both included (awarded silver Flora medal). Messrs. H. Low and Co. showed a good group, in which was a very fine form of *Cattleya Mossiæ*, with the lip of unusual size and of rich colouring (of this species the firm in question possess a very choice variety), the rich golden colour of the lip in this instance partaking somewhat after *C. aurea*. *C. Mendeli* was also represented by a very fine form with a broad, bright crimson-purple lip; *C. Schilleriana* was also to be seen, a lovely *Cattleya*; also *C. Schroederæ*. Of *Cymbidium Lowianum*, an unusually fine variety was staged, the sepals and petals being of a richer shade of yellow with as many as twenty-four flowers to the spike, of which there were three. *Odontoglossum Andersonianum* and *O. triumphans*, with *Vanda Bensonæ*, were also included (awarded silver Banksian medal).

Mr. Pitt, Stamford Hill, showed a nicely-grown collection of well-flowered plants, amongst which were several *Dendrobium thyrsoflorum* in good condition with large spikes. *Cymbidium Lowianum* was also in good form; likewise *Cattleya citrina* and *Dendrobium aggregatum majus*, with large rich yellow flowers supported on quite slender spikes. *Epidendrum atropurpureum* of deep colouring, and its white variety with paler sepals and petals and the lip of the purest white; *Miltonia Roezli*, with large flowers; *Ada aurantiaca* and *Angraecum Sanderianum*, both in good condition; *Cattleya Mendeli*, an extra fine variety; *C. Lawrenceana* and *C. Schroederæ*; *Cypripedium Rothschildianum*, a good plant; *Ornithocephalus grandiflorus*, very singular; *Odontoglossum Ruckerianum* and *O. nebulosum candidulum*, with a fine example of *Phaius Wallichii*, with dark lustrous chocolate flowers, the lip being white, with other good things were also sent (awarded silver Flora medal). Mr. R. J. Measures, Cambridge Lodge, Camberwell, showed a beautiful assortment of *Vanda tricolor*, showing great diversity of colouring and of size; also *V. suavis*, with strong spikes, this species, as it is wont, not varying to any extent. *Angraecum Sanderianum* was represented by a very long

spike, and *Cattleya Loddigesi* by well-developed flowers (awarded silver Banksian medal). Messrs. Heath and Son, Cheltenham, showed several fine healthy masses of *Cattleya Schroederæ*, one named *magnifica* being particularly fine, the lip in this instance being very broad and deeply coloured, a soft blush suffusing the sepals and petals. This plant bore twenty splendid flowers. Other good forms of this beautiful *Cattleya* were included. *Odontoglossum crispum* was represented by a very distinct form, with crimson blotches, and *Phalænopsis amabilis* by a large-flowered variety, the one spike bearing three fine blooms (awarded silver Banksian medal). Messrs. B. S. Williams and Son had *Cymbidium Devonianum*, *Cattleya Schroederæ* and *Cologyne Massangeana*, all in good character; also an exceedingly fine form of *Dendrobium Wardianum*, with flowers 5 inches across, having very broad petals and a large round lip with the inner portion of a deep golden yellow, being one of the finest forms yet seen. *Odontoglossum crispum* was shown well, and so was *Cypripedium Exul*, with well marked flowers, the spots on the dorsal sepal being quite black. *C. Rothschildianum* and *C. vexillarium* were both shown well, the latter clearly showing its relation to *C. Fairricanum*. *Dendrobium superbum* was well flowered, and so was a very healthy piece of *Chysis bractescens*, with very pure blossoms. *Cypripedium Chamberlainianum* was included, being of good colour (awarded silver Banksian medal).

Of other exhibits, Baron Schroeder had *Lælia Digbyana Mossiæ*, one of the most beautiful and unique of hybrid Orchids, being one of the greatest triumphs of the Veitchian firm in this direction. Two choice *Dendrobies* came from the same source. Mr. McNeekin, Falkland Park, Norwood, had a very distinct and superior form of *Odontoglossum Andersonianum* with a clear ground colour spotted with pale chocolate, the spike a good one. *O. Wilekeanum* with *O. Halli*, both capital spikes, and *O. cirrhosum* came from the same source. Mr. Appleton, Weston-super-Mare, had *Epidendrum atro-purpureum album*, in which the lip is of the purest white, and the sepals and petals much paler than in the type, the purple having almost vanished. *Cattleya Schilleriana* and *Cypripedium niveum* came from the same exhibitor. Mr. F. Hardy showed *Cypripedium Godefroyæ* (Hardy's var.), not unlike a small *C. bellatulum*. *Odontoglossum nebulosum candidulum* and *O. n. candidum*, two distinct forms, were included here, as well as *O. Ruckerianum* Mrs. F. Hardy, a choice form, with deep crimson spots on a light ground. Sir Trevor Lawrence had two splendid examples of *Masdevallia Armini* in most profuse flower; this is quite a gem amongst the small forms. A cultural commendation was awarded. *Eria aridostachya*, a very singular Orchid with graceful spikes of small greenish yellow flowers, and *Eria* species, with much larger flowers, more in the way of the smaller *Cymbidiums*, were included, as well as a finely flowered example of *Dendrobium cretaceum* with pure white blossoms, save the lip, which is of a creamy shade and of a downy character. Mr. Walker had a grand variety of *Cattleya Mendeli* called *Walkeriana*, with large flowers of deep colouring, the lip being exceedingly showy, the bright purplish crimson extending into the throat. Other varieties of this species came from this source also two splendid flowers of *Cypripedium caudatum* with the tail-like petals fully 2 feet long. *Dendrobium McCarthiae*, a species seldom exhibited, was also staged in fine condition, the plant being only a small one. A long spike of *Vanda Amesiana* with nineteen flowers was also sent. From Mr. Statter on this occasion came *Cattleya Prince of Wales* (hyb.), *C. Mossiæ Reineckiana* being one of the parents, in which the lip was delicately veined with light purple, the sepals and petals being milky white.

A most noteworthy exhibit, from the fact of its having been sent from Rome, was to be seen from the Prince di Venose's gardens in *Cypripedium Prince di Venose* (*C. villosum* × *C. Lowianum*), in which the former parent had borne a pre-

ponderating influence, traces of the other parent being chiefly seen in the petals. Major Joicey, Sunningdale Park, sent a well-grown plant of *Dendrobium atro-violeaceum* with three spikes of extra large flowers, and another of *Cypripedium Rothschildianum* with two grand spikes, much finer than usual. To both of these a cultural commendation was awarded. *Phaius Blumei assamiensis*, with very dark sepals and petals, came from this exhibitor also. Mr. Lionel Crawshaw had *Odontoglossum mulus* (Rosefield var.) with long spikes of flowers. From Mr. G. Marshall, Claremont House, Grimsby, came *Dendrobium chryso-toxum giganteum*, a truly gigantic form of this beautiful species, three long spikes of which were shown, the flowers being of specially rich colour. *Odontoglossum maculosum* and *Cattleya Loddigesi* came from this source also, as well as *Odontoglossum Andersonianum Victoria*, an excellent form with broad sepals and petals. *O. Halli* was specially good, and so were *O. Marshalli* and a form of *O. Andersonianum*. *O. crispum superbum*, with large pure flowers void of spotting, and *O. baphicanthum*, best described as a large *O. Andersonianum*, with two grand spikes of richly coloured flowers of *Lælia cinnabarina* with fourteen and fifteen flowers and buds respectively to each, were likewise comprised in this exhibit.

#### Floral Committee.

Awards of merit were made to the following:—

**PTERIS CRESTA WIMSETTI.**—Another crested variety of this variable fern, but quite distinct from the several forms already obtained, in which all the crests are terminal. This kind, in addition to its crest at the end of its long narrow leaflets, has lateral-crested leaflets as well, whilst the habit of growth is tall and graceful. Shown by Mr. H. B. May, Dyson's Lane, Edmonton.

**TROPEOLUM COOLGARDE.**—A basket of neat pyramidal specimens of this variety was shown. Its flowers are rich self-yellow, bright in colour, and freely borne. From Mr. H. B. May.

**ROSE MARCHIONESS OF LONDONDERRY.**—A new Hybrid Perpetual variety well shown last year. It has full, well formed white flowers of great size and substance, borne erect on a strong footstalk. From Messrs. Paul & Son, Cheshunt.

**ROSE BRIDESMAID.**—One of the now numerous sports of that good old Tea Rose Catherine Mermet; flowers of the same fine form as those of the parent, but deeper in colour, and keeping the bright pink hue, whereas those of *C. Mermet* fade with age. This also came from Messrs. Paul & Son.

**BOUGAINVILLEA SPECIOSA SUPERBA.**—A variety of this handsome shy-flowering species, with flowers much deeper in colour than those of the type, specimens of which were sent for comparison. From Mr. G. Stanton, gardener to Mrs. Nobbs, Park Place, Henley-on-Thames.

**POLYANTHUS HERMANN.**—A fine variety belonging to the bunch flowered race, with a bold truss on a stout stalk, the flowers considerably larger than those of other blue Primroses, and of a deep violet blue colour more effective by far than the lighter tinted kinds. Shown by Mr. G. F. Wilson, Heatherbank, Weybridge.

**ANDROMEDA FORMOSA,** from Mrs. Ramsden, Guildford, could not be found, so no description can be given.

**DAFFODILS** were quite the leading feature, a very fine group being exhibited by Messrs. Barr and Son. This included the best varieties in all sections. Of the trumpet-flowered kinds, Emperor, Empress, and Horsfield were prominent among older varieties, whilst *Glory of Leyden*, *Weardale Perfection*, and *Mme. de Graaf*, three noble new kinds well shown, are sure to be largely grown in the future. *J. B. M. Camm*, a pale cream-coloured variety, has a flower of good substance. Of star-flowered varieties, *Barri conspicuus*, with rich edged corona, *Orpheus*, *C. J. Baekhouse*, bright orange-yellow, *Maurice Vilmozin*, and *Crown Prince* were all fine. The Leeds varieties were well represented by *Ceres*, a graceful drooping flower, *Superbus*, with a long sulphur corona, *Beatrice*, *Fanny Mason*, and *Duchess of Westminster*, one of the largest and finest of West-

race. *Muscari* in several forms were also shown, *M. conicum* being one of the best, earliest, and most distinct, with long, conical spikes of deep blue flowers. A silver Flora medal was awarded. Mr. T. S. Ware, of Tottenham, received a similar award for a large group consisting chiefly of Daffodils, the arrangement excellent, each kind when several bunches were shown being massed together, a better way by far than the indiscriminate mixing. Emperor and Empress were good, Princess Ida charming, with pale sulphur trumpet, and Barri conspicuous, very effective in quantity. The Leeds varieties were largely represented, Catherine Spurrel especially fine with broad perianth segments and clear yellow corona, Superbus, Grand Duchess, and Beatrice being also good. Among the poetical varieties, ornatus and poetarum were good. *Dielytra spectabilis* at the back and *Anemone fulgens* as a margin in front enhanced the effect of the group. Seedling Daffodils from the Rev. G. H. Engleheart were a most interesting lot, the finest of them all that named Ellen Willmott. The flower is even larger than that of Weardale Perfection, somewhat similar in colour with pale cream petals and rich yellow trumpet, which is short but unusually broad, with a gracefully recurved fringed edge, altogether a noble flower, large without being coarse. Norma and Sir Evan were both fine, with pale creamy petals and trumpets in different shades of yellow. Two deeply coloured seedlings from princeps were of a rich self yellow shade, as rich in colour as *maximus*. If they retain the other merits of the parent they will be decided acquisitions. Princess Mary, of the poetical type, with broad pure white petals and a shallow sulphur corona, was fine, and Torch was a very bright star-flowered variety, with gracefully twisted petals and long crown edged with the brightest orange. Dorothy Yorke, of the same race, with broad shallow corona and pale yellow petals was good. Many unnamed sorts were shown from different crosses, showing that the possibilities of multiplication of varieties are practically unlimited. A silver Banksian medal was awarded. Roses, both in pots and as cut blooms, were largely shown, Mr. W. Rumsey, of Joyning's Nurseries, Waltham Cross, receiving a silver-gilt Flora medal for a large collection of specimen plants in pots, including Souvenir d'un Ami, Niphotos, Mme. Heste, L'Idéal, General Jacqueminot, Marquise de Castellane, and Magna Charta, all in fine form, and cut flowers in quantity, of Niphotos, The Bride, Souvenir d'un Ami, Souvenir de S. A. Prince, Maréchal Niel, and other well-known kinds. Messrs. Paul, Chesnut, showed Roses in pots, Elise Fugier, like a pale cream Niphotos, being noteworthy. Mme. Hoste, Catherine Mermet, Bridesmaid, Clara Wat-on, Marchioness of Londonderry, Danmark, Paul's Early Blush, Gustave Piganeau, Jeannie Dickson, and Carmine Pillar, all new or comparatively recent kinds, were well shown. A group of Cannas also contained some nice kinds as Progression, fine yellow with dark spots, Chesnut Yellow, a rich self, and Tom Thumb, a dwarf kind with red yellow-edged flowers. A silver Flora medal was awarded. Mr. F. Cant, of Colchester, staged a fine lot of cut Roses, both Teas and Hybrid Perpetuals, Ethel Brownlow, Mme. Hoste, and Mme. Cusin of the former, and Mrs. John Laing and Caroline Testout of the latter being the finest. A silver Flora medal was awarded. Mr. G. Mount, of Canterbury, received a similar award for a good collection of cut Roses, chiefly Teas, showing boxes of such grand kinds as Catherine Mermet, The Bride, Niphotos, and Maréchal Niel, with numerous other varieties in smaller numbers. Mr. J. Walker, Thame, Oxen, showed Roses Maréchal Niel and Niphotos in large quantity, the flowers very fine. He received a silver Banksian medal, Mr. J. C. Tasker, of Brentwood, receiving a similar award for a group of pot Roses arranged with *Azalea mollis* and *Adiantums*. The group of hardy flowers chiefly *Primulas* from the Guildford Hardy Plant Company was most interesting and instructive, the method of ar-

range so natural, and a great advance upon the conventional way of showing things. Choice and lovely alpine *Primulas* nestled among little rocks just as they might in their mountain home. *P. nivalis* was covered with its snowy clusters of flowers, and *P. marginata* in several forms was beautiful, its white margined tufts of leaves as pretty as its clusters of pale mauve flowers. *P. auricula*, *P. ciliata* in variety, *P. mollis*, *P. denticulata*, *P. farinosa*, and numerous other rare and pretty kinds were shown, also *Androsaces*, *Soldanellas*, *Epimedium niveum*, *Trillium erectum*, and a fine specimen of *Haberlea rhodopensis*. A silver Flora medal was awarded. Mr. G. Jackman, of Woking, was awarded a bronze Flora medal for a pretty mixed group of Daffodils, tufted Pansies, double *Primroses* in six distinct kinds, *Primulas* in variety, and other interesting hardy flowers. A large group of Ferns, Palms, and other fine foliaged plants from Mr. H. B. May, Dyson's Lane, Edmon-ton, received a silver Flora medal. The crested and other forms of *Pteris* were well represented, also *Adiantum Farleyense*, *Tropaeolum Coolgardie*, previously described, and two well-flowered specimens of Rose Crimson Rambler were conspicuous. Mr. B. S. Williams, of Upper Holloway, showed a group of *Amaryllises*, the best kinds Empress of India and President Faure, deep crimson, Colonel Kelly and Lord Valentia, light red, and Dr. Koch, white feathered with red. A fine lot of *Leschenaultia* was also shown, a bronze Flora medal being awarded. Mr. Reynolds, of Gunnersbury Park Gardens, received a bronze Banksian medal for an excellent group of *Primula obconica*, the plants most profusely bloomed, the trusses and flowers individually of large size; a really fine exhibit of this well-known plant.

From the Royal Gardens, Kew, came a group containing many species of *Primula*, rare and well known kinds, *Androsaces*, several pretty little species; *Amberstia nobilis*, cut specimens of this showy Indian tree noted elsewhere, and *Cineraria cruenta*, a pretty species with small flowers in large clusters covering the plant. Messrs. J. Veitch & Sons, Chelsea, showed blue *Primroses* in quantity, the varieties G. F. Wilson, John Gibson, Covenanter, and Elizabeth Brodie being all of a blue shade, the last named with violet blue flowers of a rich tone. *Alyssum saxatile citrinum*, which received an Award of Merit last year, was again well shown, the plants hidden in the wealth of flowers which are lemon yellow and much paler than those of the type. Mr. F. Cornish, gardener to Lady Bowman, Joldwynds, Dorking, was given a cultural commendation for *Epigaea repens*, the plants shown pictures of health, each shoot terminated by a cluster of its sweet white flowers. Sir Trevor Lawrence had some very fine Daffodils of the varieties Emperor, Horsfieldi, and Sir Watkin, also *Primula Forbesi* and *Primroses* in variety. Miss Mason, Norton Hall, Retford, showed the Florentine form of *Tulipa sylvestris*, *Soldanellas*, *Androsace carnea* and *Anemone vernalis*. *Salix lanata*, sent by Mrs. Robb, Goldenfield, Liphook, is a pretty Willow with woolly leaves and catkins. Mr. McMeekin, Falkland Park, Norwood, sent two seedling *Rhododendrons*, and from Messrs. W. Paul & Son, of Waltham Cross, came a large group of coniferous and other evergreen trees and shrubs, "to show the effects of the frost," which, as regards those shown, were of a negative character, only the tips of *Laurustinus* being browned, whilst the common Laurel, that is in a deplorable state nearly everywhere, was shown with leaves scarcely discoloured.

The exhibits competing for Mr. Barr's special Daffodil prizes were very fine indeed, and probably no finer group has ever been staged than that from the Rev. S. E. Bourn, Dunston Vicarage, Lincoln, which was deservedly awarded first prize. There were over 100 varieties, including all the finest, *Glory of Leyden* being represented by a bunch of eleven flowers, whilst Mme. Plomp and Mme. de Graaf were well shown. Other trumpet kinds included Emperor, Empress, Horsfieldi, P. R. Barr, Michael Foster, Maximus, Queen of Spain, Cernuus, Albicans, Tortuosus, and J. B. M.

Camm. The best of the yellow star varieties were Figaro, Gwyther, Barri conspicuous, C. J. Baekhouse, Flora Wilson, Beauty, and Maurice Vilmorin. In the Leeds section Duchess of Westminster was the best, Duchess of Brabant, Fanny Mason, Palmerston, Catherine Spurrel, Minnie Hume, and Beatrice all good, and of Burbidge varieties John Bain and J. Stevenson noteworthy. A charming freshness characterised the whole lot. Mr. J. T. Bennett Poë was second with an admirable lot, Mr. Cammell, of Billingshurst, third, and Mr. W. J. Grant, Bassaleg, Newport, fourth.

#### Fruit Committee.

This was one of the most interesting meetings held this year. The collections of Borcoles and Radishes from Messrs. Sutton, Reading, deserve more than passing notice after the severe winter.

A first-class certificate was awarded to—

**TOMATO ALL THE YEAR ROUND**, a very free-growing variety, bearing large clusters of medium-sized fruit, ten to twelve in a bunch, and of very good flavour for the time of year. The fruit was shown on stems cut from the plants, the growths being 3 feet to 4 feet long, with eight to ten bunches of fruit. This is certainly one of the most prolific and free-setting varieties grown. From Mr. W. Farr, The Gardens, Spring Grove House, Isleworth.

Awards of merit were given to—

**IMPROVED HEARTING KALE**.—The name is well merited, the examples being much superior to other hearting varieties—firm, solid, beautifully curled and of dwarf growth. From Messrs. Sutton and Sons, Reading.

**EARLIEST FRAME RADISH**.—This is a distinct break from the ordinary kind, earlier, of better shape than any of the Radishes we have for forcing, and of a rich crimson colour. It is very solid and grows to a nice size in a very short time. Out of some two dozen sorts exhibited this was noticeable for its colour and good qualities. From Messrs. Sutton and Sons, Reading.

Messrs. Sutton also contributed a very fine collection of Kales, no less than twenty-four distinct variegated kinds being staged. The colours ranged from dark purple to nearly white. The useful Sutton's Favourite Kale was also well shown, this being a hardy dwarf kind of Asparagus Kale, of delicious flavour when cooked and not running to seed till late in the spring. Messrs. Sutton also sent no less than twenty varieties of Radishes. These were staged in their sections—the forcing and long-rooting kinds being apart and forming a most instructive exhibit. The red and white-tipped Turnip varieties and large Crimson were very fine. Among the olive-shaped varieties mention must be made of Sutton's Forcing, noted above; Earliest of All, the roots as large as a good Filbert with scarcely any top; Forcing Carmine, very dwarf and of good colour; Crimson Forcing, scarcely any top, a grand forcing variety; Fern-leaved, an oval root with distinct Fern like leaves; The Gem, or White-tipped, a small root, but fine for salad; Golden Olive, a novelty for summer use; Scarlet Globe, a very fine type and of splendid quality; Long White and Long Rose, very handsome long-rooting kinds and of excellent quality. Two very fine Countess Melons were sent by Mr. Meads, The Gardens, Buscot Park, Faringdon, Berks. Mr. G. Wythes, The Gardens, Syon House, Brentford, received a cultural award for a nice lot of Foster's Seedling Grapes from year-old Vines. The berries were well finished and of good flavour. From the same exhibitor was sent a very fine lot of new Potatoes, Sharpe's Victor, well meriting the cultural award given. Mr. Wythes also sent a very fine dish of Seakale; this, grown in the open ground, was merely covered with soil, and was of very good quality. The Horticultural College, Swanley, sent the new Royal Sovereign Strawberry packed in market punnets, the fruit very good, of excellent quality. From the same source were sent Sir Joseph Paxton Strawberries, nice fruits and well coloured. Mr. Goldsmith, Leonardlee Gardens, Horsham, sent his new

Apple Burfield Seedling, a nice looking fruit of great merit. This was thought to be a good market fruit, and the grower was requested to report on its cooking qualities next meeting, many of the committee thinking it a valuable keeping variety. From Messrs. B. S. Williams, Holloway, was sent a dwarf French Bean bearing good-sized pods. The committee requested it to be sent to Chiswick for trial.

## NOTES OF THE WEEK.

**Iris orchoides.**—We send you by post a few spikes of *Iris orchoides* cut from the open border, where the bright yellow flowers have been a great attraction for some time past.—R. W. WALLACE.

**Epimedium niveum** is a charming little species, shown on Tuesday. It has close tufts of leaves and slender spikes of pure white flowers. It is a gem for a choice spot in the rock garden.

**Ranunculus splexicaulis** was shown in Mr. Jackman's interesting group at the Drill Hall. It is a pretty species from the Pyrenees, with slender stems each about 1 foot in height, bearing large flowers of a pure white colour with a little tuft of yellow stamens in the centre.

**Primula mollis.**—Among many *Primulas* at the show on Tuesday this was conspicuous, a well-grown example being shown by Mr. J. Douglas. It has broad, Vine-like leaves, thickly covered with soft hairs, and hairy flower-stems, which grow about 1 foot high, with blooms of a deep rose colour in several whorls.

**Amherstia nobilis.**—Some fine sprays of this Indian flowering tree were shown at the Drill Hall on Tuesday from the Royal Gardens, Kew, and attracted much notice. The flowers are borne in a long drooping raceme, and are of a soft vermilion red colour. Large specimens in flower must have a gorgeous effect.

**Narcissus incomparabilis fl. pl. ponderosus.**—A remnant from an old Irish garden, what is known as "Butter and Eggs," but in its ponderous form. If the plants had had some rain a month since the flowers would be a size larger. It is quite the admiration of all visitors to Ard Cairn, and so distinct.—W. BAYLOR HARTLAND, *Ard Cairn, Cork.*

**Tulipa præcox.**—This fine early Tulip, now flowering, although botanically not distinct from *T. oculus-solis*, is more robust and better in every way. It has large, long petalled flowers, borne on a strong, erect stem 1 foot high, of a soft red shade externally, bright red inside, with conspicuous black blotches, margined with yellow at the base.

**Fritillaria Kotschyana affinis.**—This, as shown by Mr. Barr at the Drill Hall on Tuesday, is a beautiful kind, and a welcome addition to a family which, though numerous, does not contain many species of much beauty in gardens. It will be a charming companion to *F. aurea*, which it resembles in size and shape of flower, but its colour is most distinct, a dark crimson externally, brighter inside with yellow markings.

**Pansy Blue Gown.**—Dr. Stuart thinks this is one of the best varieties he has raised, and rightly so. It is one of the earliest kinds to flower and a long, persistent bloomer. We have groups of all the best varieties, but whilst most kinds as yet have only a few flowers out, the group of Blue Gown is already quite a mass of lovely colour. It will certainly be a popular garden Pansy when better known.

**Hedysyrum multijugum.**—This delightful flowering shrub, introduced from Northern China, has proved perfectly hardy here at Exeter, and should be in every garden. It is deciduous and prefers light soil in a sunny position, where it attains about 1 yard in height when fully developed. The flowers, which appear about July, are very freely produced and are in long, loose

racemes of deep purplish crimson colour.—F. W. MEYER.

**Carpenteria californica.**—This fine shrub, referred to in the last issue of THE GARDEN, has proved hardy at Exeter without any protection during the past severe winter. During previous winters it retained its green foliage all the year round, but the present season has transformed it into a deciduous shrub. The leaves, which were shrivelled by the severe frost, have fallen off, and the plant is rapidly making new growth.—M.

**Cercus sinensis pendula rosea.**—This highly ornamental flowering tree seems very little known. Some very fine specimen standards are now in full bloom at Messrs. Veitch's nursery, Exeter, and present a lovely picture. The long slender branches have a graceful drooping habit, and are covered with bright pink blossoms resembling those of *Malus floribunda* when seen from a distance, but appearing much earlier than those of that tree.—M.

**Haberlea rhodopensis** was shown in fine form at the Drill Hall on Tuesday by the Guildford Hardy Plant Company, the specimen having eighteen strong flower-spikes bearing from three to five flowers each. The flowers are like those of a small *Gloxinia*, of a pale lilac colour, deepening to dark blue at the base. It has large, green, hairy leaves, which form perfect rosettes, is quite hardy and flourishes under conditions that suit the *Ramondia*. A coloured plate of it was given in THE GARDEN of August 28, 1886.

**Roses in the north.**—While reading of the great destruction of Roses by frost during the past severe winter I do not see many which are entirely destroyed. Those trained on arches have suffered most. Dwarfs planted with the junction of scion and stock well under the surface are little the worse. I would like to hear how William Allen Richardson has stood. Here half-a-dozen plants, all of which were planted out, are killed. One plant at the end of a cool Peach house, and allowed to grow almost wild, is loaded with flowers.—M. TEMPLE, *Carron, N.B.*

**Triacodonta hexapetala** (better known as *Crinodendron Hookerianum*).—This fine evergreen shrub has proved quite hardy in the gardens of the Earl of Annesley at Castlewellan, and has been flowering for the past few weeks. The large campanulate flowers are of a rich carmine colour, and remain on the plants for weeks before dropping off. At Castlewellan it is growing in a shaded border in peat and loam. The largest plant is about 5 feet in height. In a less favoured climate than Castlewellan it would be advisable to give a little protection in very severe weather.—T. RYAN.

**Franciscea Hopeana.**—Mr. Hudson (p. 280) has done well to call attention to this neglected and almost unknown plant. I have a moderate-sized specimen of it here which is now literally covered with its sweet-scented flowers, and is greatly admired. The peculiar way the flowers have of changing colour makes it a very interesting plant. I also have *F. magnifica* associated with it. This also has been in bloom for weeks and is likely to continue so for some time to come. What a pity it is that these and other stove flowering shrubs are not more generally grown.—J. EASTER, *Nostell Priory Gardens.*

**Rhododendron fulgens.**—I read with much interest your note on this very beautiful shrub in last week's GARDEN. Mr. James Bateman has just flowered it most successfully in his garden at Home Lodge, Worthing, within a few score yards of the sea. One very large and one small head of flower were in full beauty during Easter, and were the produce of quite a small plant, which, like that at Kew, has sustained no ill effects from the past severe winter. This splendid plant is figured in Sir Joseph Hooker's "Rhododendrons of Sikkim Himalaya," plate xxv., but even that most carefully executed plate fails, in my opinion, to convey an adequate impression of the richness of the blood-red flowers.—W. ROULETS.

**Rhodothamnus Chamæcistus** (syn., *Rhododendron Chamæcistus*).—This diminutive alpine

shrub has not suffered in the least from the severe winter. In the rock garden at Messrs. Veitch's nursery, Exeter, a pretty specimen is now in full bloom. The flowers, large for so small a plant, are of a lively pink colour and borne in clusters of three, each individual bloom being fully an inch in diameter. The plant in question was planted about three years ago; it is now scarcely 3 inches in height and 6 inches in diameter, but its small bright green leaves, which are deeply serrated, are crowded so densely together as to represent a compact evergreen cushion, which was in itself an ornament all through the winter. The position is a half shady one, and the soil, sandy peat and loam, seems to suit it admirably.—M.

**Erica carnea.**—This charming little moor heath is one of the very few species (even of our native ones) that appear to have passed through the recent winter without more or less injury—at any rate, in the neighbourhood of London. *E. vagans* and *E. cinerea*, both natives of Britain, are badly cut back, but *E. carnea*, inhabiting practically the same latitude, is scarcely affected. It is a close-growing dwarf plant, which produces its purple-red flowers in the greatest profusion during the early spring months. This is a late season and the neat tufts are now at their brightest. As a plant for forming an edging to borders or beds of American plants it has no superior. It may be planted in a formal strip, but a much more pleasing effect is made by it in informal groups or masses of varying size and width.

**A note from Liphook.**—I send you a bunch of mauve *Primroses* off a root I dug up on the shores of the Bosphorus last year. They have lit up the border here for some time past, and the plant appears to bear more flowers here than in its native wilds. The different shades caused by the deep colour of the buds among the paler expanded blossoms are striking in this species, and it has been much admired. The severe winter has been evidently a tonic to some things, e.g., *Daphne Blagayana* and the *Megaseas* I have never seen so full of bloom. In some years the latter are mostly all leaf and little flower, now it is, in fact, the reverse, and the pink bloom stands up so tall and fine that people have wondered what it could be until they came up close to the plant. *Saxifraga Malvi*, *Draba Brunoniata*, *Hydrangea stellata*, and *Puschkinia litanotica* have all been remarkably gay. I wonder the last is not oftener seen, as it is perfectly hardy and good-natured and has a very fascinating effect in the early bleak time of year.—M. A. R., *Liphook.*

**Reports of shows.**—The reports of the Royal Botanic Society and the National Auricula Society are unavoidably held over, and will appear in our next issue.

**The weather in West Herts.**—A week of very growing weather, both the days and nights having been warm for the month. At 1 foot and also at 2 feet deep the ground is now about 2° warmer than at the beginning of the week. At the depth of 1 foot the temperature of the soil is at the present time 5½° higher than the April average for the previous nine years, and 2° warmer than at the same time last year. Welcome rains have fallen during the week to the aggregate depth of nearly half an inch. A wild Cherry tree came first into blossom in my garden on the 23rd inst., which is its average date of flowering for the previous nine years, but three weeks later than last year.—E. M., *Berkhamsted.*

**Names of plants.**—*F. M.*—Probably *Lælopius dominicensis*.—*C. S. V.*—*Glonera jasminoides*.—*Thomas May*.—*Forsythia suspensa*.—*S. N. T.*—1, *Anemone apennina*; 2, *Ranunculus anemonoides*; 3 and 5, *Anemone blanda*; 4, *Dicentra eximia*; 6, *Saxifraga purpurea*.—*Erin.*—1 and 3, *Narcissus arantius plenus*; 4, *N. incomparabilis* variety; 5, *N. maximus*; 6 and 11, single and double *Jonquil*; 8 and 10, forms of *Narcissus tazetta*; 9, *N. cernuus*; 12, *Sir Watkin*; 13, *Horsfieldi*; 14, *N. princeps*; 15, *Tulipa florentina*. Several of the numbers having got detached, there was no clue to the name. We only undertake to name four varieties in one week.

No. 1224. SATURDAY, May 4, 1895. Vol. XLVII.

"This is an Art  
Which does mend Nature: change it rather; but  
THE ART ITSELF IS NATURE."—Shakespeare.

## ORCHIDS.

## ONCIDIUM MACRANTHUM.

No one who has seen this Orchid in good condition can fail to be struck with its beauty and elegance, the richly-coloured flowers so jauntily set upon the long branching scapes giving it a most distinct appearance. It is, unfortunately, too often the custom to tie these scapes round and round stakes placed in the pots, thereby quite dwarfing its beauty. To obtain the best effect, this *Oncidium* when in flower must be grouped with Palms or large Ferns, the flower-scapes hanging loosely and naturally among the foliage, the pots being, if possible, hidden from view. This makes the most delightful background for a group of Orchids imaginable. Of course, while the spikes are growing they need some support, but this may usually be managed by tying a string from a stake in the pot along the roof, securing them loosely to this. This does not cripple or bend the spikes unnaturally, yet keeps them safe from injury in other ways. Another way in which this *Oncidium* shows to good effect is upon a shady wall lined with Ferns, the plants being put in position at the time of planting the Ferns. This way of growing Orchids is not much practised, growers being apparently under the impression that the requisite attention cannot easily be given without the usual pots, baskets, or blocks. This is, however, a mistake, as I have lately proved, and I hope to say a little on this mode of culture shortly. *O. macranthum* is comparatively easily grown, but a few of the more salient points of its culture may perhaps be noted with advantage. When compared with the size of the pseudo-bulbs the flower-scapes are very large, and in order to produce and sustain them over a considerable period the plants are called upon to put forth a great deal of energy. To maintain this, they naturally push strong feeding roots, which must be carefully protected, as they are very often emitted above the surface of the compost. If the atmosphere were always congenial, possibly these would be quite as well left uncovered, but with our best care there are times when a lack of moisture or other essential will occur and the roots may suffer. Insects, too, are fond of these thick fleshy roots, and instinctively find them if exposed. A little Moss should be placed up to these roots, which should be encouraged to push into and through it to the compost below. If this is rough and light with nothing of a sour, close character about it, they will find ample sustenance among it and the drainage, the health of the plants being improved in a marked degree. *O. macranthum* is a very restless Orchid, frequently growing through the winter months, and for this reason the plants should never be subjected to a very low temperature or dried at the roots, neither is this necessary to promote free-flowering, the most vigorous plants being also the freest flowering. No Orchid is more easily affected by drought in the atmosphere, and if thrips are introduced by this means the evil is intensified, free growth being then out of the question. Periodically immersing in water for an hour or two and immediate spongings are advisable, the insects by these means being driven from their

hiding-places in the compost. This, as hinted above, should consist largely of charcoal and potsherds, the layer of peat and Sphagnum being only superficial. The climbing habit of this species renders it necessary to set the base of the plant rather low in the pot, filling up to around it with the crocks and charcoal. The temperature advised for the warmer section of *Odontoglossums* will suit it admirably, and during summer the plants must be somewhat heavily shaded. The flowers of a good typical form would be about 4 inches across. The sepals and petals are narrow at the base, becoming nearly round, crisped and wavy at the edges. The former are brownish yellow, the latter deep golden yellow; the lip small, singular in shape and colour, with a prominent raised crest. Introduced from New Grenada in 1867, it now takes a high position in this splendid genus, and when well grown is one of the most magnificent Orchids in existence. H. R.

## GONGORAS.

ALTHOUGH not commonly grown, the dozen or more species belonging to this genus are very interesting Orchids, many of them extremely free-flowering, the blossoms being in nearly all cases fragrant. They are all epiphytal pseudo-bulbous Orchids, easily grown in the *Cattleya* house or in an ordinary plant stove. The strong-growing kinds thrive in rather large baskets or suspended pots, their pendent racemes showing to advantage in this way. The compost for these may consist of equal parts of peat and Sphagnum Moss and a little charcoal. Abundance of water is required during the summer, and the syringe must be freely plied about the plants to keep red spider in check, this pest soon disfiguring the foliage if left undisturbed. During winter they must be kept rather drier at the root and given a light and airy position. The temperature must, however, be kept fairly high and rather moist, as the plants are susceptible to injury from cold or drought, a kind of black spot attacking the leaves and pseudo-bulbs, which is very disfiguring. Scale is occasionally troublesome, and must be kept in check by sponging, this also improving the appearance and health of the foliage if carefully done.

*G. ATRO-PURPUREA* is perhaps the most generally grown, and a very free-flowering species. The blossoms are produced on long pendent racemes from the base of the pseudo-bulbs, which are light green, deeply ribbed, and each bears a pair of lanceolate leaves. It is a native of Trinidad, and frequently flowers all through the summer and autumn, as soon as one spike is over another being produced. About a dozen deep reddish-brown, profusely-spotted flowers are usually produced on each raceme.

*G. BUFONIA* (the Toad-skinned Orchid) is a singular and variable species, the pseudo-bulbs and leaves very light green; the racemes are long and pendent, the flowers dull brownish purple. The variety major has larger flowers, while *leucochila* is much lighter, with a white lip. These are all natives of Brazil, and flower in spring and early summer. A species named

*G. CHARLESWORTH* was introduced by Messrs. Charlesworth, Shuttleworth and Co., and exhibited by them at the Temple show two years ago. It is a strong growing kind, and has whitish flowers with purple markings.

*G. FULVA* is a strong growing kind, the flowers resembling those of *G. bufonia*, being produced on long, elegant racemes. This and its variety *vitellina* are said to be natives of Peru and Guatemala.

*G. ODORATISSIMA* comes from Venezuela, and has large flowers of a deep lemon-yellow, blotched with red.

*G. TRICOLOR* is a fine species, somewhat similar to the last-named, but with a good deal of white about the lip. It produces long pendent racemes of flowers in early summer, and is a native of Central America.

*G. TRIMCALO* is a native of Mexico, and has pendent racemes of light yellow and purple-spotted flowers, which at a little distance may easily be taken for insects of some kind. The perfume of this Orchid is greatly disliked by some people, but tolerated by others.

There are several other species in this genus, and amateurs and others who like peculiar and grotesque flowers will find much in them to admire, while the few simple details of culture that are requisite need not deter the least experienced. R.

## ODONTOGLOSSUMS FOR AMATEURS.

THE most suitable Orchids for amateurs with only a limited amount of space at command are *Odontoglossums*. In this family may be found much variety, whilst some kinds take a front rank amongst Orchids. The majority are most successfully grown with cool treatment in a temperature that ranges from about 45° to 70°, the lowest temperature being for the winter months, and the other, or as near that as can be maintained, during the summer; the night temperature should generally fall about 5° less than that stated. *Odontoglossums* enjoy a considerable amount of shade and moisture, but the light must not be excluded; therefore it is advisable to have roller blinds fixed so that they can be let down when the sun is powerful. Water must be supplied during the whole year, but much more is needed both at the roots and in the atmosphere in the summer months, when also a good supply of fresh air will be found most beneficial, care being taken to avoid cold draughts. The pots should be well drained, clean, and not too large for the plants, which should be potted annually either early in autumn or early spring, well elevating the plants above the rim, and using a compost of about equal parts of fibrous peat and Sphagnum Moss, with a few nodules of charcoal, all well mixed together. *Odontoglossums* are natives of Central and South America, most of the species being found in New Grenada, Mexico, and Costa Rica, where they always grow at considerable elevations, seldom less than about 7000 ft. above the sea level. Some of the most beautiful and most easily grown kinds should find a place in every collection, for they are not only very useful for decorating the conservatories and grouping with other plants, but their blooms are serviceable for cutting. One of the most popular Orchids is *O. crispum* and its numerous varieties, which are extensively grown in every country at the present time for market work, the cut spikes being in great demand for coat flowers, bouquets, &c. This kind is popularly known as *O. Alexandre*, and produces long arching racemes of many flowers at all seasons of the year. The flowers, measuring from 2½ inches to 4 inches in diameter, range in colour from pure white to a rosy mauve tint, and are often more or less spotted with red. During recent years this kind has been extensively imported, and may now be purchased at a trifling cost. Another gorgeous kind is *O. grande*, but it will not succeed under the treatment above mentioned. It is a native of Guatemala, and enjoys during the winter a warmer and somewhat drier temperature, similar to that at the coolest end of the *Cattleya* house. It should be given a more pronounced season of rest. The flowers, the largest of any in the genus, measuring fully 6 inches across, are of a bright yellow colour, the sepals and petals barred and blotched with chestnut-red. *O. Rossi* is a very dwarf-growing species, producing its flowers in abundance. These are usually white or of a pale rosy shade, having the sepals and petals spotted with brown, the large lip being quite clear. Of this kind there are many fine varieties now in

existence, and these succeed best when suspended in shallow pans close to the roof. Similar treatment is also best for *O. Cervantesi*, another fine dwarf species, with pure white flowers 2 inches across, and having some broken lines of chocolate-red running transversely around the base of each sepal and petal. *O. triumphans* produces its flowers freely during the early months of the year. They are golden yellow, spotted and barred with cinnamon-brown, the fine white lip having also a large blotch of the same colour. Of *Odontoglossum luteo-purpureum*, probably the most variable species, we have quite a large number of forms. All, however, are worth growing, as they produce long racemes of flowers and are very showy. The ground colour in most instances is yellow, with blotches and spots of deep brown. This is found in its natural habitat growing in the same districts as *O. crispum*, at about 8000 feet or 9000 feet altitude, and much resembles the latter when not in bloom, but is generally of somewhat larger dimensions. There with many others should find great favour with amateurs on account of their simple requirements and great beauty, especially as they can be grown at much less cost than many of the East Indian and other heat-loving plants. A few more desirable kinds that can be mentioned are *O. polyxanthum*, *O. Insleyi*, *O. maculatum*, *O. bictonense*, and *O. citrosimum*. The last is one of the most distinct kinds known and another exception to the general rule, requiring the heat of the *Cattleya* house, with plenty of air and light shading. When at rest it must be kept quite dry, even if the bulbs shrivel. This will cause the plants to bloom more freely, and the pseudo-bulbs will soon recover and become plump when moisture is applied. It should be repotted shortly before it starts into growth, and is seen to the best advantage when suspended from the roof in either pans or baskets. The flowers, which are numerous, each measure about 3 inches in diameter: the sepals and petals white, sometimes flushed with rose, whilst the lip is usually of a bright deep rose. It is a native of Mexico, and one of the most attractive species.

WM. HUGH GOWER.

### LARGE SPECIMEN ORCHIDS.

ALTHOUGH decried in some quarters, there can be no question as to the beauty of large well-cultivated Orchids, and those who declaim most against miserable looking starvelings that have only bulk to recommend them are often the most lavish with their encomiums when confronted with beauly well-flowered plants no matter what their size. Large plants of most kinds, however, need large spacious structures to grow in, and as the predilection of present-day growers is for smaller houses, the return to favour of large specimen plants is thereby hindered. It is often the case, too, that in order to make room for new purchases the fine old plants that have for years given a good account of themselves are gradually elbowed out. In many otherwise well-managed gardens one comes across a house, perhaps an old vinery or greenhouse, wherein are grouped in a more or less chaotic condition plants of all kinds, relics of former days—Palms that have done more than their duty at the mansion, old-fashioned hard-wooded plants turned out to make room for present-day favourites, and many others—which the gardener usually describes to his visitors as a miscellaneous lot, and passes on to inspect the aforesaid favourites. So it is with Orchids. A hamper of new plants comes from the nursery or a consignment of newly-imported plants from the sale rooms; the houses are already full, and something must go into a corner, the choice often falling on some fine old *Vanda*, *Saccolabium*, or other would-be noble subject, room being wanted for the pigny *Cypripedium* or *Odontoglossum* from

which so great things are expected. It would be the height of folly to advise a whit less attention being bestowed on them, but a deep-rooted liking for the former plants prompts these few lines on their behalf. A suggestion that has frequently been made, but not sufficiently taken advantage of, is the adaptability of vineries to the growth of large Orchids. This is, I am aware, very distasteful to many fruit growers who like "the vinery for the Vines," and conjure up possibilities of mealy bug and other insects in galore; but how much of this is prejudice or alarm will be shown by the good results attending the practice where judicious management obtains. If there are successional vineries it is comparatively easy, without in any way injuring the Vines, to give the Orchids a suitable temperature and atmosphere all through the year by shifting them to the various compartments as this is necessary. It is not intended in this note to go into the details of culture, as these will suggest themselves and must vary according to circumstances, but simply to recommend growers who have these conveniences and find it necessary to relieve the pressure on their Orchid houses to remove thereto any of the grosser growing kinds. This will have the double advantage of giving the smaller plants more room and the large species a more congenial home.

H. R.

**Chysis bractescens.**—In THE GARDEN for April 15 in an article on *Chysis*, "H. R." says that *C. bractescens* sometimes has as many as six flowers on one raceme. You will find enclosed raceme has eight flowers, and the bulb that it has come from is 16 inches long. Let me know if that is an unusual number.—T. HEYWOOD, *Wellfield, Bury Lam.*

\* \* It is not usual for *Chysis bractescens* to produce eight flowers upon a raceme. The flowers, however, are not usually of full size when more than six are produced. A very fine variety I flowered several years in succession bore flowers each nearly 6 inches across, but never more than three upon the raceme, although the growth was very vigorous.—H. R.

**Cattleya Lawrenceana.**—I believe this beautiful *Cattleya* is flowering more freely than usual this spring. Possibly its culture is now becoming better understood. I grow the plants in a brisk and moist heat, conditions this species apparently likes. But what a range in the size and colour of the flowers. One plant which I have is far superior to the others, the individual blooms being very large and brilliantly coloured; in fact, the colour of the lip extends to the sepals.—A. YOUNG.

## ROSE GARDEN.

### SPRING VERSUS AUTUMN PLANTING OF ROSES.

HOWEVER strong the opinion may be in favour of planting Roses in the autumn, there is no doubt that the success of the operation depends more on the character of the weather prevailing during the winter than has been generally acknowledged. The past winter has proved this, for here in the west of England in the majority of cases quite half the plants set out in the autumn were killed by the prolonged cold weather. So far as my experience goes this is no exception, for in the early winter of 1891 and 1892 the frosty weather came on before I could complete the planting of a number of standard and bush Roses. The result was that I had more dead plants in the

following summer amongst those that were put out before the frost set in than amongst those that were laid in by their heels for several weeks and planted in the month of March. This is sufficient to convince me that spring planting has its advantages, and if I had to perform the same kind of work again in a heavy soil and bleak situation I should certainly wait until the spring before I planted Hybrid Perpetual Roses in any form. Of course, Teas and other tender Roses would be dealt with at the same time. When I was a youth I had to assist in taking up every autumn all the Tea Roses occupying several beds, and store them away in a well-sheltered corner, with some dry Bracken stuffed between the branches to prevent the frost from reaching them. When all danger of hard frost was past in the spring the plants were transferred to the beds again. Of course, under such a system we did not get very early flowers, but we saved the plants, and that is more than I have done this year with those left in the ground undisturbed, although the roots and stems were well protected with coal ashes, and even those that are alive are so terribly weakened, that half of the summer will be gone before they show any degree of vigour. There is a great deal of unnecessary prejudice existing in the minds of some people against laying in by their heels Roses that come to hand at a time when it is not convenient to plant them. I do not mean to say that I would always prefer laying them in to planting them at once, but when there are indications of severe weather approaching I am convinced it is better to place the roots in some fine earth in a snug corner, laying a little dry litter on the branches, than to put them in their permanent quarters where they will be exposed to all the rigours of a long and severe winter. In the winter I have just referred to, as well as during the one just past, I had a number of both standard and dwarf plants laid in by their heels with the stems and branches protected by litter, and although the soft tops were injured by the frost, ninety-five per cent. of the plants are alive and doing well. When laying in Roses by their heels, the main point is to see that the roots are well covered with fine soil pressed firmly about them. As showing the lateness of this season as compared with some others, on a white Banksian Rose that was in flower at the end of March two years ago, the buds are not even now showing a trace of colour, although I am writing on April 21. A plant of Fortune's Yellow is just as late in blooming, while the old Pink Monthly, which is generally so early, is hardly forward enough to show the flower-buds.

J. C. CLARKE.

Taunton.

**Roses and the past winter.**—After a season in which many losses have been sustained in the Rose garden, it would be interesting as well as advantageous to Rose growers if lists of those which have best stood the severity of the weather were given in the pages of THE GARDEN. Some years ago, after a very severe winter, many plants died off during May and June.—T.

**Roses in Sussex.**—In my garden, where there are about 350 Roses, I have only lost three; in one part where there are 160, not one has been killed, and 90 of these are Tea Roses. Forty were planted late in November. We had 20° of frost and the average for February was 9° of frost. We had not more than four inches of snow, the ground for four weeks being covered with about two inches. I also hear from all my neighbours that their Rose trees have not suffered so much as usual. Daffodil bulbs are certainly weakened, some clumps not flowering at all and it is the same with some of the Tulips.—A. S., *The Firs, Bexhill-on-Sea.*



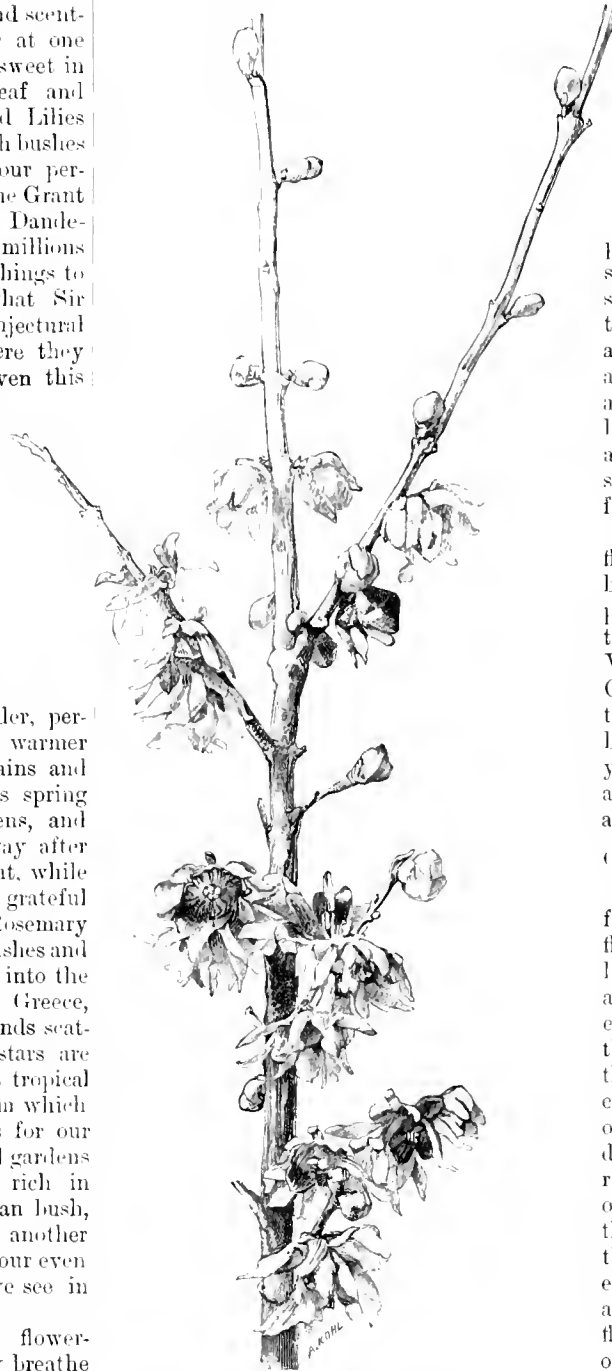
## FRAGRANCE.\*

A MAN who makes a garden should have a heart for plants that have the gift of sweetness as well as beauty of form or colour. And what a mystery as well as charm—wild Roses sweet as the breath of heaven, and a wild Rose of repulsive odour, all born of the earth-mother, and it may be springing from the same spot. Flowers sweet at night and scentless in the day; flowers of evil odour at one hour and fragrant at another; plants sweet in breath of blossom, but deadly in leaf and sap; Lilies sweet as they are fair, and Lilies that must not be let into the house; with bushes in which all that is delightful in odour permeates to every March-daring bud. The Grant Allens of the day, who tell us how the Dandelion sprung from the Primrose some millions of years ago, would explain all these things to us, or put long names to them—what Sir Richard Owen used to call “conjectural biology.” But we need not care where they leave the question, for to us is given this precious fragrance, happily almost without effort, and happily as free as the clouds from man’s power to spoil.

Every fertile country has its fragrant flowers and trees; alpine meadows with Orchids and mountain Violets; the Primrose-scented woods, Honeysuckle-wreathed and May-frosted hedgerows of Britain; the Cedars of India and of the mountains of Asia Minor, with Lebanon; trees of the same stately order, perhaps still more fragrant in the warmer Pacific breezes of the Rocky Mountains and Oregon, where the many great Pines spring from a carpet of fragrant Evergreens, and a thousand flowers which fade away after their early bloom, and rest in the heat, while the tall trees overhead distil for ever grateful odour in the sunny air; Myrtle, Rosemary and Lavender, and all the aromatic bushes and herbs clothing the little capes that jut into the great sea which washes the shores of Greece, Italy, Sicily and Corsica; garden islands scattered through vast Pacific seas, as stars are scattered in the heavens; enormous tropical forests, little entered by man, but from which he gathers on the outskirts treasures for our Orchid houses and greenhouses; island gardens like Java and Ceylon and Borneo, rich in spices and lovely plant life; Australian bush, with traces of plant life as if from another world, but often most delicate in odour even in the distorted fragments of them we see in our greenhouses.

It is not only from the fragile flower-vases these sweet odours flow; they breathe through leaf and stem, and the whole being of many trees and bushes, from the stately Gum trees of Australia to the sweet Verbena of Chili. Many must have felt the charm of the strange scent of the Box bush before Oliver Wendell Holmes told us of its “breathing the fragrance of eternity, for this is one of the odours which carry us out of

time into the abysses of the unbeginning past.” The scent of flowers is often cloying, as of the Tuberose, while that of leaves is often delicate and refreshing, as in the budding Larch, and in the leaves of Balm and Rosemary, while fragrance is often stored in the wood and down through the roots.



Flowering shoot of *Chimonanthus fragrans*.

It is given to few to see many of these sweet plants in their native lands, but we who love our gardens may enjoy many of them about us, not merely in drawings or descriptions, but the living, breathing things themselves. The Geraniums in the cottage window bring us the spicy fragrance of the South African hills; the Lavender bush of

the sunny hills of Provence, where it is a home; the Roses in the garden bring near us the breath of the wild Roses on a thousand hills; the sweet or pot herbs of our gardens are a gift of the shore-lands of France and Italy and Greece. The Sweet Bay bush in the farmer’s or cottage garden comes with its story from the streams of Greece, where it seeks moisture in a thirsty land along with the wild Olive and the Arbutus. And this Sweet Bay is the Laurel of the poets, of the first and greatest of all poet and artist nations of the earth—the Laurel sacred to Apollo, and used in many ways in his worship, as we may see on coins, and in many other things that remain to us of the great peoples of the past. The Myrtle, of less fame, but also a sacred plant beloved for its leaves and blossoms, was, like the Laurel, seen near the temples of the race who built their temples as Lilies are built, whose song is deathless, and the fragments of its art Despair to the artist of our time. And thus the fragrant bushes our gardens may entwine for us, apart from their gift of beauty, living associations and beautiful thoughts for ever famous in human story.

It is not only the odours of trees and flowers known to all we have to think of, but many delicate ones, less known of, perhaps, by reason of the blossoms that give them being without showy colour, as the wild Vine, the Sweet Vernal, Lemon, and other Grasses. And among these modest flowers there are none more delicate in odour than the blossoms of the common white Willow and yellow-twigged and other Willows of Britain and Northern Europe, all the more grateful in air coming to us.

O’er the northern moorland, o’er the northern foam.

What is the lesson these sweet flowers have for us? They tell us—if there were no other flowers to tell us—that a garden should be a living thing; its life not only fair in form and lovely in colour, but in its breath and essence coming from the Divine. They tell us that the very common attempt to conform their fair lives into tile or other patterns, to clip or set them out as so much mere colour of the paper-stainer or carpet-maker, is to degrade them and make our gardens ugly and ridiculous, from the point of view of Nature or true art. And many of these treasures for the open garden have been shut out of our thoughts owing to the exclusion of almost everything that did not make showy colour and lend itself to crude ways of setting out flowers to compete with tiles and like modes of “decoration.”

Of the many things that should be thought of in the making of a garden to live in, this of fragrance is one of the first. And, happily, among every class of flowers which may adorn our open-air gardens there are fragrant things to be found. Apart from the groups of plants in which all, or nearly all, are fragrant, as in Roses, the annual and biennial flowers of our gardens are rich in fragrance—Stocks, Mignonette, Sweet Peas, Sweet Sultan, Wall-

\* First written for McDonald’s “Sweet-scented Flowers.” London. 1895.

flowers, double Rockets, Sweet Scabious and many others. These, among the most easily raised of plants, may be enjoyed by the simplest cottage gardeners. The garden borders of perennial flowers bear for us odours as precious as any breath of tropical Orchid, from the Lily of the Valley to the Carnation, this last yielding, perhaps, the most grateful odour of all the flowering host in our garden land. In these borders things are sweeter than words may tell of—Woodruff, Balm, Pinks, Violets, garden Primroses, Polyanthuses, Day and other Lilies, early Irises, Narcissi, Evening Primroses, Mezerion and Pansies delicate in their sweetness.

No one may be richer in delicate fragrance than the wise man who plants hardy shrubs and flowering trees—Magnolia, Thorn, Daphne, Lilac—names each telling of whole families of delightful things. Among shrubs, those without any strong odour, like hardy Heaths, are welcome to many who are often touched by remembered fragrance of some plant they do not always know. From the same regions where we found the Laurel and the Myrtle we have the Laurustinus, beautiful in all our sea-coast and milder districts, and many other lovely bushes happy in our climate: one, the Winter-Sweet, even pouring out delicious fragrance in mid-winter: Sweet Gale, Azaleas, Allspice, and the delightful little Mayflower that creeps about in the woodland shade in North America. So, though we cannot boast of Lemon or Orange groves, our climate is kind to many lovely and fragrant shrubs.

Even our ugly walls may be sweet gardens with Magnolia, Honeysuckle, Clematis, Sweet Verbena, and the delightful old Jasmine, still clothing many a house in London. Most precious of all, however, are the noble climbing Tea Roses raised in our own time, within the past fifty years or so. Among the abortions of this century these are a real gain—the loveliest flowers ever raised by man. Noble in form and colour, and scented as delicately as a June morn in alpine pastures, with these most precious of garden Roses we could cover all the ugly walls in England and Ireland, and very many of them are in want of a veil.

The old way of having an orchard near the house was a good one. Planted for use, it was as precious for its beauty, and not only when the spring winds carried the breath of its myriad blossoms of Cherry, Plum, Apple, and Pear. There were the fruit odours, too, and the early Daffodils and Snowdrops, with Violets and Primroses on the banks came, and overhead the lovely hardy trees that bear our orchard fruits, Apples, Pears, Cherries, Plums, Medlar and Quince. To make pictures to last round the year and far along them I should ask for many orchard trees on a few acres of good ground (all the better if too uneven for the plough): a rough belt of native Evergreens, Hollies, Yew and Fir on the cold sides to comfort trees and men; and with careless garlands of Honeysuckle, wild Rose, and Clematis among them

here and there, and in the bank fence plenty of Sweet Brier, and May, and Sloe.

The fence would not be cut every year into a bare and ugly line, but May, Sloe and Sweet Brier left to bud and bloom, and the bank and hedge to form a shelter as well as a strong fence—not to be touched oftener than every ten years or so, and then when dealt with it should be woven together in the strong way usual in parts of Kent, that is, strong and tough enough to keep back an elephant. On the cool side of these sod banks the Primrose and the Oxlip would bloom long and well, and on all sides of them Daffodils and Jonquil, with Snowflakes, Snowdrops, wild Tulips or any bulb-like thing we had to spare from the garden; and from the garden clippings, too, a few tufts of Balm and Myrrh to live for ever among the Grasses of the bank and below the wreaths of Honeysuckle.

W. R.

## STOVE AND GREENHOUSE.

### PELARGONIUM CULTURE.

THE fact that the old enthusiasm for the culture of show and fancy Pelargoniums has to a great extent subsided is not easily accounted for, as it would be difficult to name any class of soft-wooded flowering plants more attractive or useful during the months of May and June. At one time in almost every garden of any pretensions there was a batch of show Pelargoniums which were kept by themselves and treated in a special manner, the blooming season being watched with more than ordinary eagerness. Anyone accustomed to visit the metropolitan shows twenty years ago will not readily forget the gorgeous specimens exhibited by Mr. John Ward, of Leyton, and which I suppose have never been equalled by those of any other grower.

One of the first to improve the Pelargonium was Mr. Beck, a slate merchant, of Isleworth, who raised many new varieties, some of which would be hard to beat even at the present day. Amongst others might be named Desdemona and Mare Antony, the former a light flower with a purple blotch and a prodigious bloomer, the latter of a darker shade and equally as free. Old exhibitors will remember these varieties. To grow Pelargoniums well a fair amount of skill and great regularity are necessary, and for this reason they are best kept by themselves. The best compost for the plants is loam cut from a pasture the reverse of rich containing a large percentage of fibre. A rich loam, especially if manure is added, is very apt to produce a sappy growth, which should be avoided. To the loam should be added in autumn short stable manure well soaked with urine, stacking layer by layer. After it has been stacked some weeks and the manure has become decomposed, the heap should be chopped down and the ingredients well mixed. It should then be removed under cover and kept dry till wanted, sufficient rough sand being added at potting time to keep it open.

After the plants have done flowering water should be withheld for a few days, after which each shoot should be cut back, leaving only a few eyes at the base of each. No water must be given till the wounds heal over, when the plants may be daily moistened with the syringe to induce them to break again into growth.

When the shoots are half an inch long the plants should again be allowed to dry at the ball previous to shaking them out and removing all the soil from the roots. The main roots should be cut well back and all the fibrous ones left intact, after which the plants should be potted into as small pots as will hold them, using loam and sand free from manure. If a frame is at command a sufficient quantity of leaves should be placed therein to produce a gentle bottom heat. In this plunge the pots, moistening the ball and keeping the frame close and shaded until the plants are again established, which will be in a week or ten days. After this more air should be admitted until the lights are entirely removed in the daytime, the great aim being to keep the new growth dwarf and stiff and to induce rest. On the approach of frost remove the plants to a light airy greenhouse, keeping them as near the glass as possible. From this time to the middle of January no more water should be given than is required to keep the shoots from flagging, abundance of fresh air being admitted in fine weather by both the top and bottom ventilators. About the third week in January is a good time to put the plants into their blooming pots, draining well and using the compost first named; pot firmly, returning the plants to the greenhouse, again keeping them rather close and shading for a week should the weather be bright. As growth advances syringe the foliage overhead when the house is closed early on sunny days, fumigate on the first signs of aphid, and stop the shoots according to the time the plants are wanted to flower. If required for exhibition, train the shoots directly they become sufficiently pliable, and always smoke the house immediately before the first flowers open. Stimulants ought not to be supplied until the bloom-trusses appear, as if the plants are healthy and strong they frequently flower unsatisfactorily if rich food is given before that date. Although not lasting so long as some flowers when cut and placed in water, they are most useful for that purpose, and plants in bloom, if placed in a frame behind a north wall or hedge and elevated on bricks so as to allow of a free current of air passing amongst them, will remain in full beauty for a considerable time. Diluted sheep manure water suits Pelargoniums best.

J. CRAWFORD.

**Asparagus deflexus.**—As regards this variety of the Asparagus, there seems to be a little confusion. I have noted at Kew that a variety is there grown under the name of *A. decumbens*, which some will have is identical with *A. deflexus*, but in my opinion this is not so. The latter has a sturdier habit of growth, the leaves are more densely set upon the stem, being also a trifle longer, and a shade deeper of green pervades the entire plant, whilst the same drooping graceful habit is still retained. To my way of thinking, *A. deflexus* is superior in every way to *A. decumbens*. The one may only be a varietal form of the other, but that there is a most perceptible difference is quite evident to those who have had an opportunity of making the comparison. Be this as it may, there is no question as to the usefulness of *A. deflexus* as a basket plant or for planting out in ferneries on overhanging pieces of rock where its long growths can hang down without hindrance. It will withstand quite a cool temperature when established. During the past severe and prolonged winter it kept well in every way in a temperature of from 36° to 40° at night during the coldest spells. As a basket plant for the conservatory or fernery it is well suited.—H. G.

**A new race of Begonias.**—In conjunction with some members of the tuberous-rooted section,

*B. socotrana* has already given us those beautiful flowering varieties, *Adonis*, *John Heal* and *Winter Gem*; and now it has been employed with *B. Rex* in the production of a totally different class, one member of which received an award of merit when shown at a meeting of the Royal Horticultural Society on November 27 last year. The variety so honoured out of several that were shown by Messrs. Sander, of St. Albans, was named *Winter Queen*, and very bright and effective it was at that dull season of the year. The foliage is very ornamental, and, in addition, the infusion of *socotrana* blood has resulted in flowers vastly superior to those borne by *B. Rex* and of a pleasing pink tint. The markings of the leaf vary a good deal in the different varieties,

cannot be successfully amalgamated; if it be done, the plant so treated is bound to suffer in both directions. Should it have been grown on quickly by more frequent shifts, it will never withstand the variations of temperature concurrent on being used in apartments for two or three days together. The cause of this is the want of a hardened growth consequent on not being grown in relatively small pots. *Crotons* that are confined at the roots, but potted in good soil, will withstand a deal of rough treatment and remain in a healthy state for a long time. It will be quite useless, however, to attempt afterwards the task of building up a thriving specimen out of such material, the constitution having become in a measure hardened, but not of likely after development. An

advantage be more often grown than they are now-a-days, for the blossoms of many of them are very beautiful. *E. tuberculatum* is in general appearance very different from most of the others, as it forms a little shrubby specimen with a profusion of branches clothed with small oval leaves of a brownish green tint. The branches are studded with curious little tubercles, from whence the specific name is derived. These tubercles at a superficial glance appear very like a quantity of scale insects, but on closer inspection their true nature is apparent. It is just now flowering freely, the blossoms being pure white and with a long, slender tube somewhat after the manner of *Bouvardia Humboldtii*. The mouth of the flower is over an inch across.—H. P.



The blue Throat-wort (*Trachelium caeruleum*).

and in the case of *Winter Queen* the leaves are much undulated and consist of a star-shaped centre of dark olive-green, surrounded by a belt of silvery grey; while on the outside of the leaf is a broad belt of bright green, dotted with white, altogether forming a very pleasing combination. *Begonias* of this group certainly promise to be a very useful class, and no doubt before long they will be generally distributed in gardens. The hybrid *Begonias* now in cultivation are the product of a great number of widely different combinations.—H. P.

**Decorative Crotons.**—By this expression of the adjective it is the intention to convey the difference between a plant that is being grown on with some degree of rapidity, so as to obtain a specimen plant, and that of one destined to be turned to account for furnishing purposes outside of the stove itself. The two methods of treatment

apt illustration may be taken from the pigmy trees as grown by the Japanese gardeners when contrasted with others of the same kinds that are being advanced under generous treatment. These facts should be borne in mind by all who grow *Crotons* for furnishing. Too humid an atmosphere, too high a temperature, and too free a use of shading will all tend to failure as far as it pertains to this kind of stock. As far as shading is concerned, none at all is required for well-established plants. Shading will not be conducive to colour such as one aims at securing in *Crotons*. Until the pots are thoroughly well filled with roots it is never safe to make use of *Crotons* in unfavourable situations.—H. G.

**Eranthemum tuberculatum.**—This *Eranthemum*, which was introduced from New Caledonia over thirty years ago, is not a common species; indeed several members of the genus might with

### THE THROAT-WORT.

(*TRACHELIUM CAERULEUM*.)

It is only fitting in these days, when too much dependence is placed upon subjects that are chiefly remarkable for their showy properties, to draw attention to this comparatively modest plant. Those who are in search of a plant that will do good service from the middle of August (or sooner if need be) until the end of September (if kept back under a north wall) cannot do better than turn their attention to the plant in question. It is of the easiest possible culture, the old shoots being quite safe in a cold frame through the winter. Some authorities deem it, however, a hardy plant, but this term may, perhaps, have to be modified in some measure if we have a recurrence of such severe winters as the past. It may be propagated in the spring by cuttings taken from the base close to the soil, some of which, it is quite possible, will have roots of their own. Such as these will make capital plants to flower the same season in 6-inch pots, being afterwards cared for to grow on the following spring, so as to provide a set of larger plants if need be. Seedlings can also be readily raised, but when this plan is adopted I would advise the sowing of the seed from plants that have flowered comparatively early in August as soon as it is ripe. This plan will provide a better plant than if spring sowing be adopted, it being possible to keep a goodly number of seedlings in a shallow box or pan through the winter months in a cool greenhouse. In any case this plant may be treated as being as hardy as *Chrysanthemums* from cuttings, or even more so, there being no need of house room from the end of March until the flowering season comes round. For large conservatories this but little-known plant will do specially good service at a season when any novelty is a pleasing change. The best trusses of violet-blue flowers are produced on the terminals, but the lateral shoots on strong plants will also yield a very good display. Scarcely any insect will cause trouble when close attention to watering and syringing is given, which in either case may be liberal. The soil in which I have grown my plants is loam and leaf-mould with a little sand, potting being done in a fairly firm manner. Of this blue Throat-wort there is also a white variety, but I much prefer the type to this varietal form, which is not really so effective. It should be noted that spring-struck cuttings will make dwarfer plants than the seedlings.

SOUTHERN.

**Streptosolen Jamesoni.**—This is a beautiful flowering plant for the greenhouse, and though of very easy propagation and culture, it was, singularly enough, lost soon after its introduction into this country in 1850. It was then unknown, except from botanical specimens, till M. André found it in Ecuador in 1882, and introduced it into France. After that it soon became generally grown, but

certainly not more than its merits deserve, as the distinct orange-red flowers are borne in great profusion and a succession is also kept up for a considerable time. This *Streptosolen* is nearly related to the *Browallias*, and is indeed included in that genus by many authorities. In colour at all events it is quite distinct, for most of the *Browallias* have blue flowers. Though the flowering season of this *Streptosolen* is spread over a considerable period, it is, I think, seen at its best in spring and early summer. I have met with it in better condition and in greater quantity in many places this year than formerly, and it is certainly a plant that pays for a little extra attention. In too dry an atmosphere red spider is apt to cause the foliage to turn yellow and drop, but no other insects give much trouble.—T.

#### PALM SEEDS.

Now that Palms are far more popular than was at one time the case, large importations of seeds frequently reach this country, and immense numbers are disposed of at the London sale rooms. The recent announcement of a forthcoming sale of over half a million seeds has suggested a few notes on the subject, for most Palms require rather different treatment from that given to the seeds of other classes of plants. The selection of Palms generally grown for ordinary decoration is not an extensive one, the most commonly met with being the *Kentias*, *Latania borbonica*, *Cocos Weddelliana*, *C. flexuosa*, *Seaforthia elegans*, *Areca lutescens*, *A. Baueri*, *A. sapida*, *Phoenix rupicola*, and *Corypha australis*. Palm seeds as a rule reach this country in better condition than was at one time the case, and now out of some importations nearly every seed will germinate. It is very necessary to examine the seed, for in numerous cases when the germ has perished it will be found that the body of the seed is as firm as ever. A stove is a very suitable place for raising Palm seeds of all kinds, and if they can be plunged in a gentle bottom heat, so much the better. They will germinate all the more readily if previous to sowing them they are soaked for twenty-four hours in water at a temperature of about 80°. The pots, pans, or boxes in which the seed is to be sown should be fairly, but not excessively drained and filled with a soil composed principally of good loam and sand, lightened if the loam is too heavy by an admixture of well-decayed leaf mould or peat. All manures or stimulants of any kind, though valuable later on, should in this early stage be avoided. In sowing, the soil should be pressed down moderately firm, and overcrowding the seeds must be guarded against. They should be covered with soil to about their own depth and plunged in a little bottom heat; no further attention than watering will be necessary till the seeds germinate. Until this takes place the pans or boxes may be stood under the stages or in any out-of-the-way spot, but there is far more probability of their being overlooked, and perhaps suffering from extremes of drought and moisture than if they are plunged in a bed with a gentle bottom heat. Frequently in the case of Palms the seed germinates in a very irregular manner—that is to say, a few will at times make their appearance soon after sowing, while many of them will not grow till some time later. As Palm seeds that reach this country have of course been ripened some time before, and have perhaps undergone many hardships, they should on receipt be sown without any unnecessary delay, as it may make all the difference between a good and a bad crop. When the young plants make their appearance a very good time to pot them off is just as the first leaf is developed, for the roots then soon start in the new soil, whereas if they are allowed to grow larger before potting they are very liable to suffer a good deal from the removal. Small pots should be chosen for the first potting, as most Palms are very impatient even when large of a mass of soil around the roots. A compost such as that in which the seed was sown will, if passed through a sieve with half an inch mesh, do well for the young plants. Of course such free growing subjects as *Latania borbonica*, *Areca lutescens*, and

*Seaforthia elegans* will need even at first larger pots than the weaker growers represented by *Cocos Weddelliana* and *Geonoma gracilis*. In most cases the seed remains attached to the young plant, and it then furnishes a good guide as to the depth the seedling should be placed in the soil at the first potting. As a rule it should be so situated that the seed just rests on the surface of the soil. If plunged in the stove and a good moisture-laden atmosphere be maintained, the young plants of such kinds as are above enumerated will make good progress. They must be kept in a steady growing state and repotted when necessary, for though many Palms will do wonderfully well in small pots, yet if once allowed to become stunted it is very difficult to induce them to grow freely again. As a great deal of the beauty of a Palm consists of the symmetrical manner in which the foliage is disposed, it will be particularly necessary to guard against overcrowding, and the plants must also be turned around occasionally to ensure a well-balanced specimen. Liberal syringing will keep down insect pests to a very great extent, the greatest trouble being scale, which, if allowed to effect a lodgment on the leaves, is very difficult to eradicate. As the plants get larger and reach a decorative size occasional stimulants will be of service, and it is also very necessary to keep the foliage clean. H. P.

#### FOUR GOOD NEW SOLANUMS.

MONSIEUR GEORGES BRUANT, of Poitiers, Vienne, France, the well-known introducer of new plants, is now offering for the first time at such extremely moderate prices as to put them within the reach of all lovers of novelties the following four new species of *Solanum*, most if not all of which should, I think, be great acquisitions to British gardens. M. Bruant describes them as follows:—

*SOLANUM SEAFORTHIANUM* is a native of the Antilles. It has climbing stems with pinnatifid leaves having nine to eleven leaflets, and produces inflorescences of large dimensions in pendent bunches, which afford by their shape and size the appearance of bunches of *Wistaria sinensis*. On each bunch may be counted about forty agreeably perfumed flowers of a delicate and beautiful shade of lilac-blue with golden yellow anthers. The plant is free blooming and of easy culture, and may be used for training up the rafters of a greenhouse or to a wire or light timber trellis in a pot.

*S. DAMMANNIANUM*.—A large and very ornamental species for planting out during the summer. During the course of a single season this plant forms a small pyramidal tree of about 9 feet in height, with large woolly leaves gracefully serrated. In the autumn bunches of large deep blue flowers with golden anthers appear at the extremity of every branch; the plant is then very beautiful.

*S. MOIS ELEPHANTUM*.—A species recently introduced from Equatorial Africa by Dr. Stuhlmann. It reaches about a yard in height with violet stems and deep green foliage. The flowers are large and of a light blue colour, to which succeed large fruits of a canary yellow colour which hold themselves upright and are produced in threes. These fruits are, it seems, very injurious to elephants, hence the name of the plant.

*S. DUBLOSIANUM*.—This very beautiful species has been recently introduced from Abyssinia. It is a plant of robust habit of growth and of easy culture in an ordinary greenhouse; it is well suited also for planting out during the summer or for pot culture if preferred. The foliage is particularly elegant, and the whole plant highly ornamental with large blue flowers set off by golden yellow stamens. The berries which succeed the flowers are pure white in colour. Since writing the above descriptions, translated from M. Bruant's new catalogue, I have found two portraits of *Solanum Seaforthianum*, the one on plate 504 of the 8th volume of Andrew's *Botanical Repository* and the other on plate 1982 of the 45th volume of the *Botanical Magazine*. These pictures represent a distinct and different plant

from the one described by M. Bruant, with numerous small pale, rosy flesh-coloured flowers, and it is stated that the plant was introduced as far back as 1804. It is also said to be synonymous with *S. venustum*, and is also figured in *Botanical Register*, vol. 12, plate 969, and in *Loddiges' Botanical Cabinet*, vol. 10, plate 971; but while the two first cited plates agree as to colour the two latter totally differ from them, being of the palest shade of lilac-blue. It remains therefore to be seen which brace of plates is the correct representation of M. Bruant's plant.

W. E. GUMBLETON.

#### AZALEA HENE.

THIS variety belongs to the small-flowered group of greenhouse Azaleas, and is the only one that has been illustrated in *THE GARDEN*, where a coloured plate was given August 6, 1892. It was raised by M. Otto Forster, of Lehenhof, from that well-known variety of the Indian section *Duc Adolph de Nassau*, fertilised with the pollen of a good form of *Azalea amœna*, the result being a very pretty small-flowered Azalea. It retains the hose-in-hose character of *A. amœna*, but, as might be expected, the flowers are larger than in that kind, and in colour they are a very pleasing bright rosy purple and borne in great profusion. Azaleas of this class are now numerous, and many of them are very valuable for the embellishment of the greenhouse at this season or even earlier, for they respond well to gentle forcing. The rage for huge blooms is, however, still pretty general, and by many freedom of flowering, good habit, and other desirable qualities are of small moment compared with the size of bloom. When the public taste in this respect alters we shall doubtless see this class of Azaleas more appreciated than it is now. The idea of crossing the little *A. amœna* with some members of the Indian section would seem to have originated with Mr. Carmichael when at Sandringham, and many of the varieties raised by him are still grown. The best known of the Sandringham varieties are William Carmichael, Duke of Connaught, Princess Beatrice, and Mrs. Carmichael. The variety of the Indian group principally employed by Mr. Carmichael in the production of his hybrids was that free-flowering form *Stella*. Of small flowers other than that of European raised hybrids we have the typical *A. amœna*, and particularly its variety *Caldwelli*, with larger blossoms than the normal form, the Japanese *A. calyciflora*, whose hose-in-hose blooms are of a bright salmon-red colour with a distinct orange shade, and the little *A. obtusa* with orange-red flowers. Of this last there is a variety whose blooms are white or occasionally striped. Azaleas of this group are very readily propagated from cuttings, and plants so obtained are more satisfactory in all ways than those increased by grafting. The cuttings should be formed of the young shoots taken just as they commence to lose their succulent character, and being dibbled firmly into well-drained pots of sandy peat must be kept close till rooted. In structures where it is difficult to maintain heat during the winter these small-flowered Azaleas will be found useful, for the hardy *A. amœna* being one of the parents, they are, as might be supposed, less liable to be injured by severe weather than the members of the Indian section. The various forms of this last are, however, not all equally tender, for the old white *A. indica alba* is hardy in some places. H. P.

**Early-flowering Magnolias.**—There are at present three kinds of Magnolia in bloom—two species and a hybrid. Although they cannot, unfortunately, be described as amongst the never-failing pleasures of spring—the flowers are too frequently injured by frost—they attain to perfection often enough to well deserve the space they occupy in the garden. Their beauties, too, are all the more welcome and appreciated because of their somewhat uncertain continuance. First amongst the three in importance is the Yulan (M.

conspicua), one of the early introductions from China, and one of the most lovely of all hardy trees. Its dark leafless stems are now laden with the erect cup-shaped flowers, the vivid white of which is all the more effective where it has a background of some Evergreen or even of a group of our native deciduous trees. Very similar to the Yulan in general aspect is the hybrid *M. Soulangiana*; this variety has as one of its parents *M. obovata*, and inherits from that species the purple stains on the outside of the flower. In size of both tree and flower, however, it is equal to the Yulan. Completing the trio is the charming *M. stellata* or *Halleana*. This is a dwarf shrub and commences to bloom when only a few inches high. When small it may be grown in groups or beds, and if the ground between the plants is occupied by some flowering bulbs like the *Chionodoxa*, or *Grape Hyacinth*, flowering at the same time, a most lovely combination is produced. This *Magnolia* grows large enough, however, to stand as a single specimen, as may be seen by the fine rounded bushes, 4 feet high, in the Coombe Wood nursery. A sheltered position should if possible be selected where other and hardier vegetation gives protection from light frosts and from the morning sunshine that so often follows. It is a native of Japan.—B.

## BOOKS.

### INJURIOUS INSECTS.\*

WE have, as usual at this time of year, to welcome another report of observations on injurious insects by Miss Ormerod. This is now the eighteenth year in which she has published these reports. The present one contains observations on thirty pests. Of these twenty-one are insects, three mites, four eelworms, one springtail, and one millipede. Of these, nine—namely, six insects, one mite, one eelworm, and one springtail, are mentioned for the first time, so that the number of pests reported on last year was considerably less than in the few previous ones. This should not be a matter of surprise, as every year our knowledge of the pests which attack our crops becomes more perfect. This report is a very interesting one, and contains much valuable information, but, as in previous reports, it is by no means easy to get at it. With judicious editing it might with much advantage have been much reduced in size and the information it contains given much more concisely without omitting a single item. The pagination of this report is somewhat peculiar; the preface is paged 1 to 7, the actual notes of observations 1 to 118, the appendix 1 to 62, and the index 1 to 3. Why four sets of numbers are used instead of numbering the pages straight through does not appear. Protest must be made against the practice of calling caterpillars which feed on the leaves of trees and plants grubs. There is some excuse for calling some of the caterpillars which feed at the roots of plants grubs, but when alluding to the larvae of the eyed hawk moth, to speak of them as grubs, "but with great grubs like these"—see page 3—twice again on the same page. Also on page 5 the caterpillars of the lappet moth are spoken of as grubs. Ignorant persons like some of her correspondents may speak of caterpillars as grubs, but they would equally understand what was meant if the word caterpillar was used, and in a work of this kind care should be taken to call things by their right names. Miss Ormerod mentions in the preface that no less than about 140 different kinds of insects and other pests have been sent to her with inquiries during last year. A list is given of 70 of the most important attacks; and, speaking of these attacks, she says: "During the past season of 1894 nearly all our common kinds of crop and orchard insect

pests were present, but no attacks were reported as being prevalent generally over the country to a serious extent, or, excepting in the case of the antler moth, over large districts, and the attacks not previously recorded as present were all of importance." An appendix of 62 pages is devoted to the ox-warble, about which in the preface Miss Ormerod says: "The great point of attention, however, of the year has been ox-warble. We (that is those concerned) have been working on constantly, steadily, and with good results, and especial advance has been made in attention to the subject in Ireland. So long as the simple directions, which we have kept well before cattle owners for the last seven years, we do well. But I am bound, though with much regret, to lay before all concerned that there is a great cause for being on the alert against advice claiming to be authoritative, yet in which well proved, easily practicable, and almost costless treatment is left unnoticed and inefficient application advised." The first three insects reported on, the eyed hawk moth (*Smerinthus ocellatus*), the lappet moth (*Gastropacha quercifolia*), and the large tortoise-shell butterfly (*Vanessa polychlora*), can hardly be considered as garden or farm pests. Their caterpillars, like all others, injure to some extent the plants or trees on which they feed, but they are not at present, and there is no record of their ever having been present in sufficient numbers to be really injurious. It is suggested that perhaps "with these, as with other occasional infestations of large and handsome caterpillars sometimes of rare species and usually not very numerous, it would often be the best way towards getting rid of them to let some neighbouring collector of entomological specimens know of their presence." The large tortoise-shell butterfly is one of our handsomest insects, and very rarely occurs in such numbers that the word "injurious" can be properly applied to it. After mentioning the best means for their destruction, the authoress seems struck with remorse, for she says in conclusion "but generally speaking the large and beautiful insects are so scarce, that they might be left uninjured with little fear of consequences. The antler moth (*Charax graminis*), whose caterpillars feed on the roots of grass, and where present, as they are at times, in very large numbers, they completely destroy the grass over a large district. They are most abundant on the hill pastures in the north of England and the south of Scotland. Last year they did much mischief in many places. The caterpillars were often infested by a parasite, one of the hair or threadworms belonging to the genus *Mermis*. These worms are 7 inches and even 8 inches long, and only of the thickness of a piece of fine twine. They are also subject fortunately to a disease which causes the greater part of the interior of the body to turn into a brown liquid containing bacteria. The best means of destroying this pest is by firing the grass. The Hessian fly grubs were not much in evidence last year, only three observations on them having been sent in to Miss Ormerod. One of the insects mentioned for the first time in these reports is the caterpillar of a moth belonging to the genus *Miana* (probably *M. expolita*), which is classed in the division of moths called *Nocturina*. "The caterpillars were observed early in the year doing serious injury to a field of young wheat near Lymington, in Hampshire, by feeding in the centre of the plant and also to some degree eating the young leaves round the centre." One point in connection with the attacks of this insect which is satisfactory is that they were only found in "ley ground," so that it is probable that the eggs were laid at the roots of the grass which was ploughed in, and they afterwards attacked the young wheat. If this be so, there is not much fear of its becoming a very common pest. One of the most important reports is that on the eelworms which injure Hop plants. Professor Percival, of the South-Eastern Agricultural College, Wye, has been making some observations on Hops which have become what is commonly called "nettle-headed," a disease which appears to be on the increase, and the cause of which

was unknown. Professo. Percival finds that the disease is caused by eelworms infesting the roots. Apparently there are two kinds which injure the Hops much in the same manner. The stem eelworm (*Tylenchus devastatrix*), a well-known species which causes "tulip-root" in Beet plants and stem sickness in Clover, and the Beet eelworm (*Heterodera Schaechti*), which is found at the roots of various plants on the Continent, but which had not hitherto been detected in England. Miss Ormerod has published in this report some of the main features of Professor Percival's discovery, but a full account of them is given by himself in the March number of "Natural Science." Miss Ormerod suggests that eelworms may not be the only cause of the abnormal growth, for she says "the same or a very similar kind of diseased growth may be caused by various other attacks or diseases," and she suggests sulphate of potash or sulphate of potash and sulphate of ammonia as remedies, or the more radical cure of digging up and destroying the affected plants. Prof. Percival says, with regard to remedies, "It may be remarked at the outset that there is no known method of exterminating these nematodes from the soil when once they have become established there, and consequently it becomes imperative to call attention to the necessity for dealing summarily with the pest in the earlier manifestations of this new disease. Thousands of experiments have been made on the Continent with a view to eradicating the *Heterodera* from the Beetroot fields, but without success. Applications of alkaline solutions and alkaline salts to the soil as manures have met with some success. Top-dressing in spring with muriate of potash or sulphate of potash has been found most beneficial. Lining in some instances and working in of salt have diminished the evil effects of the parasites, and the former should be tried, especially where the soil is full of humus from the indiscriminate use of large quantities of organic manures. As soon as an affected plant is seen in a garden it should be grubbed and burnt on the spot, and quicklime applied to the ground in the immediate neighbourhood. All implements used in cultivating infected gardens should be properly cleaned before being used among healthy crops, and the planting of 'sets' taken from infected gardens should be discontinued." It is difficult to determine the rate at which the parasites would spread if left to themselves; there is no doubt that the parasites are at present largely carried from "hill" to "hill" by the incessant cultivation which goes on in the Hop garden. Another new pest is a small beetle, *Helophorus rugosus*, to which Miss Ormerod has given the name of the Turnip mud beetle, which eats the leaves of Turnips, and its grubs feed on the upper part of the bulbs and in the leaf-stalks. They do most damage when the plants are small. Hitherto the attacks of this insect have only been noticed in Scotland, but owing to its small size and habits it is highly probable that this may have been overlooked in England. The beetles are only about a quarter of an inch long. The thorax and wing cases are deeply grooved, and are usually covered with soil and dirt, which it is difficult to free them from on account of the roughness of these parts. This adventitious covering renders them very difficult to find. The usual remedies for the Turnip flea beetle are recommended, or nitrate of soda sprinkled along the rows. One of the spring-tails (*Smynturus lutea*) is reported on for the first time. It was found injuring Turnip crops in Aberdeenshire. It feeds on the leaves, generally on the undersides. These spring-tails are very small, measuring only the thirty-second of an inch in length. They are of a yellow or orange colour. Three species of ground beetle—*Pterostichus madidus*, *Harpatus ruficornis* and *Calathus rutiloides*—are important as being destructive to ripe Strawberries. The ground beetles, of which there are a large number of species, are very active insects with sharp jaws, and are usually carnivorous, their structure and habits being well fitted for preying on other insects; it is, however, evident that they relish Strawberries. In market

\* "Notes of Observations of Injurious Insects and Common Farm Pests During the Year 1894, with Methods of Prevention and Remedy." By Miss E. A. Ormerod. Simpkin & Marshall.

gardens where a considerable acreage is under Strawberries it may be questionable whether it is good policy to destroy them or not; but in private gardens I should strongly advise that they should not be killed, as the amount of service they and their grubs do in destroying other insects is very great. Placing straw or lawn mowings under Strawberries is, I consider, a very questionable proceeding, as both harbour garden pests of various kinds. It is much better to employ some other means of keeping the fruit off the ground, such as the wire guards made for that purpose. The appendix of 42 pages gives, as the authoress says in a note at the commencement, "In a connected form such an abstract of the minor points of information regarding warble fly, contributed to me by British observers as would place all that is requisite regarding the history of the infestation, as it has been observed in this country, together with proved means of prevention and remedy, in a conveniently available form before those practically interested." This abstract has evidently been prepared with much care and trouble, as the amount of statistics given in various tables shows most conclusively. It should certainly be studied by all who are engaged in breeding cattle. G. S. S.

### THE HORTICULTURAL HANDBOOK AND EXHIBITORS' GUIDE.\*

This book was first published about twelve years ago under the title of "The Horticultural Exhibitors' Handbook," and the appearance of a new edition with a slightly altered title and revised by Mr. Dunn, of Dalkeith, may be taken as some evidence of its usefulness to the class for whom it has been compiled. The main body of the work remains the same as in the first edition, being separated into four divisions, dealing respectively with plants, cut flowers, fruit and vegetables. These divisions are divided into sections, that of plants, for example, being very comprehensive. Nearly all of both the flowering and fine-foliaged plants that appear at shows are alphabetically arranged, and concise, practical cultural instructions are given as to growth and training to secure exhibition specimens. Even those who never exhibit would find much here that could be read with profit, as the details of culture have the same practical value to all. In the supplement the Rose, Carnation, and Chrysanthemum have been revised, because of the considerable additions made to these three great families of flowers within the last decade. Some of the best Tea Roses, as Edith Gifford, are left out, and the selection nothing like so good as it should be. A classification of competitors is given also. This may be useful, but the disputes that arise are more from the loose way in which schedules are drawn up than from any difficulty of defining the difference between practical and amateur gardeners. The supplement concludes with a chapter explaining a new system of judging horticultural exhibits "by a simple and easy method which, while doing full justice to cultural merit as the leading object of award, aims at giving fair credit as to the relative value of the exhibits."

**German books on forestry.**—Dr. Schlich kindly sends us the following in reply to a question on the subject: If you want a compact book on forestry, the whole in one large volume, get "Lehrbuch der Forstwissenschaft," von Carl Fischlach, latest edition. I only have the third edition (1877), published by Julius Springer, Berlin. I presume he also brought out the later editions. A somewhat more modern work is "Encyklopädie und Methodologie der Forstwissenschaft," by Dr. R. Hess, published by C. H. Beck, Munich (three parts). If you wish to go into full details get the following: "Der Waldbau," by K. Gayer; Paul Parey, Berlin.

\* "The Horticultural Handbook and Exhibitors' Guide." By Mr. W. Williamson, Tarvit, Etc. Revised by Malcolm Dunn. (W. Blackwood and Sons, 1895.)

"Der Forstschutz," by Dr. R. Hess; Teubner, Leipsic. A translation of this is in the press and will be out shortly. "Die Forstbenutzung," by K. Gayer; Paul Parey, Berlin. "Die Holzmesskunde," by E. Bauer; Paul Parey, Berlin. "Die Waldwirthschaft," by Heyer, latest edition by Wimmerauer; Teubner, Leipsic. "Die Forsteinrichtung," by Judeish, Dresden, Schönfelds, Bushardt. The translation of Hess's "Forstschutz" is in type. The translation of Gayer's "Forst Utilisation" ought to come out before the end of the present year. Volume 3 of my "Manual of Forestry," containing forest mensuration, valuation and forest working plans, has just been published by Messrs. Bradbury, Agnew and Co.

## GARDEN FLORA.

### PLATE 1012.

#### THE COLLEGE GARDEN SLIPPER-WORT.

(WITH A COLOURED PLATE OF CALCEOLARIA BURBIDGEI.\*)

This is a hybrid, raised in the College Botanic Gardens, Dublin, from seeds cross-fertilised in the autumn of 1879. The parent plants were *C. deflexa* (*Botanical Magazine*, t. 6431), a species perhaps more generally known as *C. fuchsiae-folia* in gardens, and figured under that name in *THE GARDEN*, vol. xv., plate 258, where a full and accurate review of the species may be found. The male parent was the old *Calceolaria Pavoni*, named in honour of the traveller Pavon, and figured in the *Botanical Magazine*, t. 4525. *C. deflexa* is also a Peruvian plant, introduced in 1878, and, as its specific name implies, it is remarkable for its smooth and glossy, Fuchsia-like leaves. The only element of doubt as to the above parentage is that a plant or two of the well-known *C. amplexicaulis* (*Botanical Magazine*, t. 4300) was in bloom in an adjacent greenhouse, and it is just possible that some insect may have carried its pollen to the stigmas of *C. deflexa*, which I had only touched with pollen from *C. Pavoni*. Personally, I should have had no suspicion of this having taken place, all the evidence of the hybrid plant itself bearing in the contrary direction; but when Dr. John Macfarlane was making his series of microscopic studies of the minute structure of various hybrid plants at Edinburgh some years ago I sent him *C. Burbidgei*, together with both its parents, and he then thought that he detected signs of *C. amplexicaulis* in the hybrid. Be this as it may, the result is a free-growing plant of robust habit of growth, having hoary, opposite, perfoliate leaves, in this respect somewhat resembling *C. Pavoni*. It is hardier and more free-flowering than that species and blooms from November until March in a sunny greenhouse.

This hybrid plant was named by Mr. W. E. Gumbleton, of Belgrove, in *THE GARDEN*, vol. xix., 1881, at p. 59 of the number for January 15, the name employed being *C. hybrida Burbidgei*. At a later date Mr. Goldring found the plant flowering at Kew, and Mr. Cannell also gave it a trial at Swanley as a winter-blooming plant with some success. As a pot plant, however, I could never do much with it, but as a greenhouse pillar climber, planted out in a bed of loam, peat and sand, it grows 10 feet to 15 feet in height and blooms most profusely all the winter and spring months. Its habit is really semi-herbaceous, for although it never dies down and is always more or less evergreen,

\* Drawn for *THE GARDEN* in the Royal Gardens, Kew, by H. G. Moon, Nov. 17, 1894. Lithographed and printed by Guillaume Severelyns.

it sends up a new crop of shoots from the base every summer, and when these have attained a height of from 3 feet to 5 feet it is best to cut nearly all the old blooming growths away, so as to make room for the younger ones. As so treated my plant—one of the original seedlings—has occupied the same position in a cool greenhouse for fourteen years. In fact, to have it at its best it requires liberal root room, good open compost, and plenty of head room near the light for its great panicles of clear yellow flowers. The plant will not be found in "Index Kewensis," from which work garden hybrids are excluded, but it is mentioned in Nicholson's "Dictionary of Gardening," vol. i., p. 239, and notes of its having bloomed in various places occur in *THE GARDEN* and other horticultural papers from time to time. The plant is easily propagated from cuttings at any time during the spring and summer months, and it is, as indicated above, a rapid grower. In *THE GARDEN*, vol. xx., p. 422, Mr. T. Smith alludes to *C. Burbidgei* as improving on longer acquaintance, and also mentions that he effected the same cross, but whereas my own crop of seedlings was all exactly alike, with a strong bias towards *C. Pavoni*, his were different, producing "every form of foliage from a slight departure from the seed parent to that of the pollen parent almost pure and simple." It would be interesting to know if Mr. Smith's seedlings showed any marked differences when they flowered.

On glancing over the older volumes of the *Botanical Magazine*, *Botanical Register*, and other botanical and horticultural publications of half a century or so ago wherein many species of *Calceolaria*, at that time but recently imported, are illustrated, one regrets that the old species or wild varieties are so rarely seen in our greenhouses to-day. Many of the sub-shrubby kinds are nearly hardy, and some are most graceful in habit, while others have flowers most quaint in form and brilliant in colour. The dainty little *C. Fothergilli*, from the cold and wind-swept Falkland Isles, and *C. Kellyana*, one of the early garden hybrids, have grown and flowered here out of doors, and the pretty little annual *C. chelidonioides* is naturalised in many gardens. *C. rugosa*, yellow, and *C. violacea*, both shrubby kinds, are also hardy in mild localities, and well worth careful culture. The essential characters of form and colour of the College Garden (Dublin) Slipper-wort are beautifully shown in the accompanying illustration.

F. W. BURBIDGE.

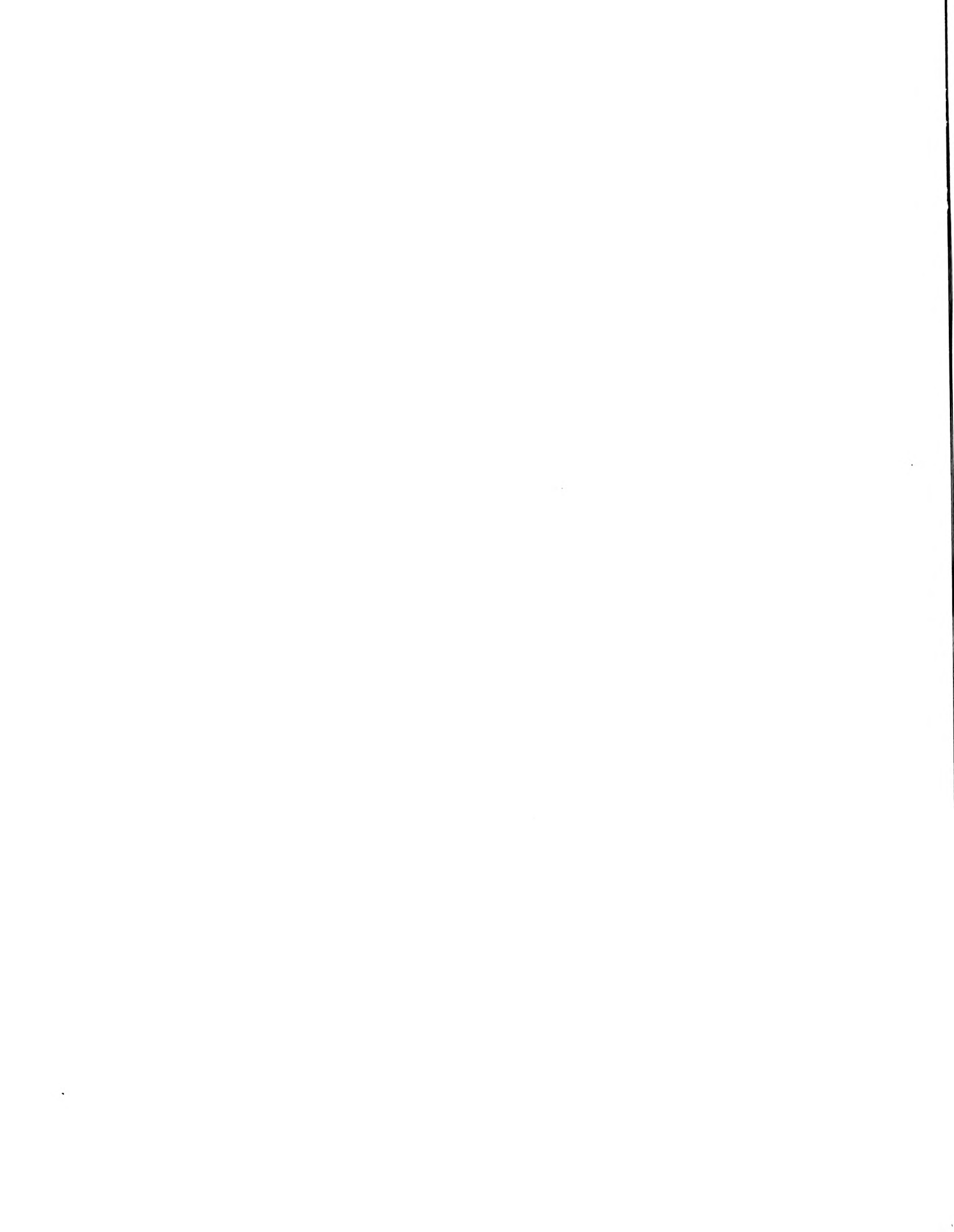
## THE WEEK'S WORK.

### THE KITCHEN GARDEN.

**ROUTINE WORK.**—Where large breadths of early vegetables are grown there will now be plenty of work in the shape of thinning out the young seedlings, using the Dutch hoe between the growing crops. Upon no account allow such things as Carrots, early Turnip-rooted Beetroot, and Spinach to grow beyond the natural thinning size, or irreparable mischief will be done, as not only is general weakness thereby encouraged, but the work of pulling out the plants where thickly clustered together opens the surface to such a depth, that drought at the roots and its attendant evils are bound to follow, especially on hot sandy soils. In thinning Carrots proceed gently at the first, as the Carrot fly is almost certain to be very troublesome this season, especially in exposed gardens, owing to parching winds and a scarcity of atmospheric moisture. Immediately this pest



1907 - [illegible] - [illegible]





appears, dust with wood ashes pure and simple, do not mix lime with it, as this is apt to burn the tender growth, and the former ingredient is always effectual. When sparrows attack the young leaves of Beet, wood ashes will drive them away. The same piecemeal system should be adopted when thinning out the Beet, a second and final thinning being given in about a fortnight's time, should genial weather accompanied by showers set in. A keen watch must be kept, as slugs and snails are sure to be numerous, despite the severe winter. The early morning is the best time to search for the former, and the evening for the latter pests, when they can be quickly despatched by lime or salt. This should not be thrown on to them where they are, but be put into a flower-pot and the pests thrown into it, using a plant label for the purpose. Where the French Forcing or any other of the earliest section of Carrots is growing on raised beds in dry situations the crop will now be greatly benefited by occasional waterings, the morning being preferable for this operation until the nights get warmer, when afternoon watering will be best. I have sometimes given a shallow mulch of spent Mushroom manure to early Carrot beds with advantage.

**TURNIPS.**—Sowings at intervals of three weeks will now be necessary where this vegetable is held in esteem, as no root crop degenerates so rapidly after arriving at maturity as Turnips, although

The centres only of the spaces between the rows should be utilised, so that walking room is allowed for gathering the Peas. As an actual summer Radish no sort is equal to the red and white Turnip kinds, these being firm and less liable to eat hot or stringy. Although growing in shady places, Radishes after this date must be regularly soaked with water if tenderness and high flavour are important. Moreover, nothing responds more quickly to applications of manure water, but after using this, clear water should always be given to cleanse the tops.

**TRIPOLI ONIONS.**—The surplus bulbs of the Tripoli section which were transplanted as advised during March will now be established and growing fast. It is a capital plan to mulch between the rows with Mushroom manure, previously giving a good dressing of some quick acting and safe fertiliser. I find the Trebons a first-class Onion to sow in autumn, and one that stands the winter even better than the ordinary so-called winter Onion. I have a small bed of it, and every plant looks healthy and promises to swell out into normal sized bulbs. They do not grow away so quickly in the autumn, consequently they get less gross and sappy and stand severe frost much better. I believe some other varieties of spring Onion would do equally well if sown in September on firm ground not too heavily manured. In fact, too much manure is an evil with all autumn sown



The Sweet Bay (*Laurus nobilis*). See p. 301.

lifting and laying in under a north wall will in a measure check this. After this date the Early Milan should be replaced by the Snowball and Six Weeks type, these being of rapid growth and excellent flavour. To provide against failure, several sorts may be sown at each sowing. Dobbie's Model, a Turnip much resembling Snowball, is a grand variety. So also is the old Purple-top Munich. For those who are fond of a yellow-fleshed sort Veitch's Golden Ball is as good as any. A border which only receives the sun's rays for a portion of the day is to be preferred for Turnip sowing now. In such a position they come on gradually, do not flag at midday as do those on south borders, and the maggot is far less troublesome. Give a liberal but not over-rich harrow, sow thinly, and remove a percentage of refuse plants directly they can be handled and before they crowd each other. I strongly advise the use of guano for Turnips in preference to farmyard compost, this latter, particularly on strong land, inducing hollow bulbs and long tap roots. June sowings do well on north borders if well worked and exposed for several weeks to the action of the air. Wood ashes cannot be too freely used amongst Turnip crops, either when digging the plot or as broadcast sowings, to be hoed in immediately afterwards.

**RADISHES.**—From the present to the expiration of the outdoor season Radishes thrive much better if favoured with partial shade. Where room is abundant there is, of course, no necessity to sow between rows of Peas, but they do well in such a position and last a good time in eatable condition.

batches, assistance being easily given in spring from the surface. Spring-sown rows will now need the Dutch hoe between them, but thinning can hardly be commenced until the surface has been well moistened by genial rains, or the young seedlings will snap off, leaving the base of the bulb and root in the ground only to grow away again. Give a good coating of soot to ward off the Onion maggot, always taking the precaution to use it after having been exposed to the air for some time. If sown over the crop soon after being taken from chimneys it is apt to do more harm than good.

**STAKING PEAS.**—This will now be necessary with many early rows. There is, however, a great deal more in staking Peas than many appear to be aware of. No greater mistake can possibly be made than to ram in a great number of thick stakes on either side of the rows, thereby darkening the space between and weakening and retarding growth. Far better is it to employ a moderate number of main sticks, filling in the intervening spaces with smaller spray-like material. This will admit a maximum amount of sun heat and light, and if the haulm should eventually fall through here and there, it may be brought back and kept in its place by running tar twine or coarse string the whole length of the rows, entwining them round the main stakes at intervals. In regard to earthing up, much more is done of this than is needed. For the earliest crops the less earth drawn up to the Peas the better, as it shuts out the sun's warmth and often throws off rain which would otherwise descend to the roots.

There is little fear of injury from drought at the roots till the July crops commence to pot, and even then I would advise moderate earthing only, giving a good mulch of short litter on each side of the rows to conserve the moisture. As each sowing comes through the surface, protection must at once be given, as not only are sparrows more numerous than usual, but natural food more scarce also.

**FILLING UP BLANKS.**—After a somewhat indifferent harvest in 1894, many of the larger-seeded marrow Peas are not germinating so well as could be wished. Moreover, snow-storms were very prevalent just after many sowings of this section had been completed; consequently much of the seed has rotted. Under such circumstances, the best, and indeed only, plan is to sow at once either in boxes or pots, removing to a comfortable greenhouse, or similar place, until growth is a couple of inches high. Hardening off may then be quickly accomplished and the vacancies all made up. The same may be said of Broad Beans, these being very liable to rot in late spring and in unfavourable soils. It will be as well after planting to protect these heat-raised portions of the rows by small sprays of Yew or Laurel.

**PRICKING OUT AND HARDENING OFF.** Whatever press of other work there may be, the all-important operation of pricking off all crops now in the rough leaf must not be neglected. Crops of Celery will, in the majority of places, be fit for this ordeal, and as soon as this is completed the boxes, if such are used, should be at once removed to frames, and after being duly sprinkled and kept close for a few days exposed to plenty of pure air to stiffen and consolidate growth. Where Celery is expected in September early sowings will by this time be so far advanced as to warrant removal from cool frames or pits to sheltered corners in the open air, some means being adopted for providing a slight screen from sharp frosts, should such occur. The earliest Brussels Sprouts may now be treated in exactly the same way to prepare them for transplanting to the permanent quarters the second week in May. A little artificial manure may well be given now, as if the weather is unfavourable and planting postponed, the plants are apt to suffer from want of nourishment. Cold water from wells should not be used, rather using that which has been exposed to the action of the sun for a time. J. CRAWFORD.

#### FRUIT HOUSES.

**EARLIEST GRAPES.—POT VINES.**—The very early supplies are mostly obtained from pot Vines, and to have good colour and the best flavour a lower temperature with less atmospheric moisture must be maintained. If the plants for next year's forcing are not in their fruiting pots no time should be lost in potting them, as the ripening season is never too long, for the wood of pot Vines to be forced early should be as hard as possible. Pot firmly, burying a portion of the shoot. By this means the plants root out freely at the base and shorter jointed wood is secured. The compost should consist of good loam, some artificial manure, wood ashes, or mortar rubble. If room is required for the young plants, to save time I have carefully transferred a few pot plants to a cooler house, taking care to give enough water, as the roots dry quickly after being plunged. A few growers cut back their old canes early in the autumn and force again, but I do not advise it when young canes can be grown, as though the old canes force more readily, they bear smaller bunches. If it is desired to force again, re-pot into pots two or three sizes larger, growing on for a few weeks in a warm moist house, letting the lateral growth run freely. In potting it is well to remove drainage and strong roots, and when the pots are full of new roots the plants should be hardened off, removed to a sunny wail, carefully watered and pruned early, leaving a couple of the best buds or eyes at the base of this season's wood.

**PERMANENT VINES.**—The fruit now colouring will need more air and less atmospheric moisture, but

it is well not to cease damping down even when the Grapes are colouring, as the Vines will soon get red spider unless a genial atmosphere is maintained. Leave air on the ventilators at night and increase the amount during the day, with a nice warmth in the pipes in cloudy or damp weather. Grapes finally swelling should be thoroughly watered at this stage, giving food now, as later it cannot be applied. A dressing of guano or liquid manure may be given before watering. The berries if at all thick may receive a final thinning. The growth of early Vines will now be less vigorous, and the laterals should be regulated freely over all parts of the trellis, pinching back the strong ones, but allowing the leaders or others required for extension to ramble freely at the back of the house. This will promote root growth and greatly assist in swelling up the buds at the base required for next season's fruiting. Now is a good time to give the inside borders a good surface dressing with manures. For light sandy soils cow manure is excellent, and if a little dried it does not run so close together. I have used it and short stable manure in equal quantities with advantage. The male not only feeds the surface roots, but saves the water-pot, and also prevents the spread of insect pests by retaining moisture.

**SUCCESSION HOUSES.**—These will now be at a critical stage. Thinning will be the most pressing work, and with Vines in full growth it is well to thin early, even if a second thinning is necessary afterwards. In earlier notes on thinning I have not advised such rigorous cutting away of bunches as is now necessary, as there is now little fear of bad setting in carefully-ventilated houses. Muscats require more careful management, as the least drought often affects the setting, and in some old houses with little sunshine and much rain it is well to assist by fertilising with Hamburg pollen, to maintain a high temperature, with a free circulation of air all over the house, and in bright weather to damp down during the day. The temperature for Muscats at the stage named may be 70° at night in mild weather, allowing 70° during cold or windy weather, with a free rise during the day up to 95° at closing time. Houses recently started for late Muscats need liberal treatment. There should be no retarding after this date, as much better results will follow high culture, and such Grapes will keep better. Syringing overhead must cease as soon as the Vines show the bunches freely, and it is well to disbud early and remove superfluous bunches. Muscats always show a profusion of bunches, so that a good proportion may safely be removed, and even then they will need another thinning after the flowering period is safely past. Vines in outside borders are slow in making new roots until the growth is advanced, so that the plants have not required water. It is well to give a dressing of a good fertiliser, and wash it in, doing the work when the sun warms the soil. Should the soil be dry a watering now will tide the Vines over the flowering. Inside borders should likewise have a good soaking when the bunches are showing freely, but food will not be necessary till the fruit is set. The temperature advised for earlier houses will apply to later Vines, 70° at night, with a rise of 10° to 15° by day, avoiding a damp atmosphere at night when at the critical stages.

**LATE VINES,** such as Lady Downe's, Gros Colman, and others, will likewise need encouragement and pushing on, as with favourable weather there is none too much time to perfect a good crop, and for keeping, the fruit should be thoroughly matured before the days get short and the nights cold and damp. Hamburgs require less time than the late kinds named above, but it is not wise to retard even Hamburgs. Now is a good time to add to outside borders if the late varieties are in need of more room and are planted outside, as by the time the roots are active the soil will be warmed and in nice condition. Inside borders of late houses need similar attention, and it is well to do the work by the end of April or early in May.

**PLANTING.**—Planting Vines in outside borders is best done at this season. These may be much

assisted by covering the surface over with warm litter for a few weeks after planting should cold sunless weather follow. This will allow of more liberal treatment in the house, as the Vines will form roots sooner and take hold of the new soil. Any late planting of houses which are not doing well may yet be done. For this work Vines struck from eyes this season or from last season's canes may be used. I have used both and got equally good results. Should the last year's canes be selected, these will have been under a north wall in the open for a time, and if not cut back this should be done. To prevent bleeding it is well to lay the canes down on their sides, keeping dry for a short time. They may be cut back to within a few inches of the base and then allowed to break slowly, planting in inside borders when a few inches long or just as the new roots are starting. If newly-struck Vines are used they may be planted at any time when ready, but should there be any delay or the house not be available, the Vines may be planted in boxes or any other mode adopted to allow the roots to run freely.

**FORCED STRAWBERRIES.**—From this date the pot plants will suffer badly if on exposed shelves against a wall, and will require so much watering, that the plants are most difficult to keep free of red spider, no matter how well attended to in the way of food and moisture. Many growers advise saucers or other means to retain moisture, but I do not advise this, the flavour of the fruit being so much impaired. I do not think any system can equal cold frames for plants well advanced and required for late fruiting. The plants, stood on a cool coal ash bottom, require less water, and the fruits are equal to those from out-door plants. Wherever a cold house or frame can be spared for the latest lot there is a great saving of time with watering. Plants in vineries or Peach houses should be cleared away at the earliest moment possible. Plants just setting their fruits in warm pits do well plunged half-way in leaves or fibre if the drainage be good. Grown in this way, it is advisable to stake each truss and to air freely if the pits are low and moist, using fire-heat till the fruits are set and thinning early. Such varieties as President, Sir J. Paxton, Sir C. Napier, and British Queen are noted for their good crops and quality if forced slowly to provide the late supplies. The first three require severe thinning to get large fruits and plenty of food when swelling the crop. British Queen will do well with more warmth during the setting and should be kept free of mildew, as this variety and President are soon much crippled if the pest is allowed to spread. To check mildew syringe all parts of the plants freely with sulphur and water, and dust the soil or shelves with dry sulphur when the house is dry, keeping the plants dry overhead for a few days after applying the sulphur. When introducing plants into warm houses at this date it is well to dress with sulphur before giving much warmth, as once mildew appears it soon spreads to other plants. A little attention should now be paid to the runners planted last July or August for the supply of forced material this season. The flower trusses must be removed as they show, and in dry weather the plants well repay copious supplies of liquid manure or water. If the latter, give a surface dressing of guano before watering, and in poor or light soils mulch with manure between the rows. This will encourage the plants to form very early runners for layering. As a mulch, spent Mushroom or old Cucumber beds answer well.

G. WYTHES.

**The golden flowering Currant** (*Ribes aureum*)—Although this shrub has a rival now in bloom (also with yellow flowers) in the shape of *Forsythia suspensa*, whose attractions, this season especially, are so brilliant as to put it somewhat in the shade when both are seen at a distance, it is, I think, at close quarters a shrub of almost equal charm. Its neat foliage is at this early stage of a singularly pleasing tender shade of green, and intermingles most effectively with the short crowded flower-spikes. This species is one (like *R. sanguineum*)

whose flowers vary a good deal in size and colour. In the better varieties the flower individually is close on half an inch in diameter, with five oval petals. The colour is always yellow, but ranges from a rather pale shade to golden or orange. The variety *aurantiacum* is perhaps the best, having not only richly-coloured large flowers, but it is also of a sturdier habit than is common to the species as a whole. The leaves, quite smooth and free from hairs and consisting of three lobes, measure each from 1 inch to 1½ inches across. The flower-spikes are slightly drooping and 2 inches to 3 inches long. The shrub does not often attain a greater height than 6 feet or 8 feet. Like the other flowering Currants, it can be easily and rapidly increased by cuttings. It was introduced from North-western America in 1812.—B.

## KITCHEN GARDEN.

### TOMATOES IN THE OPEN.

WHEN we have such a summer as that of 1893 there is no difficulty in growing heavy crops of well-ripened Tomatoes. Not only did the plants growing against sunny walls and fences produce grand crops, but those quite in the open succeeded nearly as well. Even self-sown plants left to take their chance gave a considerable weight of fruit, much of which ripened. We neither expect nor desire many such hot dry summers, but if we only get a little more sunshine than we had last year, or say a good average season, then there is every likelihood of Tomatoes more than repaying for what little trouble is expended on them. If it should happen that more ripe fruit is forthcoming than is wanted for immediate use, any good house-keeper or cook ought to know how to store or otherwise utilise these, while the unripe fruit can be made into fairly good preserve and is excellent in a pickled state.

Too often Tomatoes are raised a month or six weeks earlier than they ought to be. Kept standing about in a badly root-bound state, the plants are sure to become leggy, the stems also hardening. Those raised later, the seed being sown, say, early in April, can be grown rapidly to a serviceable size in a temperature a little higher than is needed by ordinary greenhouse plants, and not being badly root-bound, they take more quickly to the soil in which they are finally planted. Late raised plants may be planted out of 4-inch pots, while those raised earlier have to be shifted into the 6-inch size, and even then become badly root-bound. One of the consequences of this turning out root-bound plants is the inevitable loss of their first bunch of bloom, the younger ones behaving better in this respect, and being usually the first to give ripe fruit. Soil that will grow Potatoes profitably will be quite as well suited to Tomatoes. When, however, that found at the foot of hot dry walls and fences is of a poor nature, and probably hard and dry, remove it to a width of 15 inches and 1 foot deep, replacing with fresh loam with a little manure added, or, failing the loam, the best garden soil available. In some instances, all that is needed is a little fresh soil and rotten manure mixed with the old soil. Good crops of Tomatoes are sometimes had without the addition of either fresh soil or manure. If in a dry state, break it up and give a thorough soaking of water or liquid manure the day previous to planting. The plants should be well hardened off and planted out during the first week in June. If plentiful, arrange them 12 inches apart and keep them to

a single stem; if scarce, dispose them 3 feet apart and lay in two side shoots so as to have three main growths 1 foot apart. Should head room be limited, train obliquely, otherwise take them straight up the wall or fence, not stopping the leaders till four or five bunches of fruit are formed or showing. From first to last not a superfluous side shoot should be allowed to develop. If left till they need a knife to remove them they will have weakened the plants to no purpose; therefore, pinch them out as fast as they show at the base of the plants and at the axils of the leaves. Leave the primary leaves intact till such time as ripening of fruit commences, when they may be shortened to about half their original size so as to admit of all the sunshine possible reaching the clusters. If the soil was made very firm about the roots, there is little likelihood of the growth being unduly soft and shy-bearing, and, as a rule, it pays well to mulch with short manure and also to water occasionally till the plants are fairly well established, and subsequently during very dry, hot weather.

Those who have neither garden walls nor fences may yet be successful in growing Tomatoes without these aids. I once grew extra heavy crops on plants trained up the front brick wall and on to the roof of a low forcing house, a temporary raised border being provided for the roots. Wooden screens fixed in a sunny position are sometimes utilised for Tomato culture, while thousands of plants are annually grown, with varying success, quite in the open. These may be dotted thinly among early Potatoes or planted in close succession to any lifted extra early. In the former case the Tomatoes might be planted 12 inches to 15 inches apart in every second furrow between the Potatoes, and they may be arranged on clear ground the same distance apart in rows running from north to south and from 3 feet to 4 feet apart, or be put out about 30 inches apart each way. Each isolated plant should have a strong 4-foot stake placed early against it and be kept well secured to this, topping it when near the top of the stake and closely removing all side shoots. The plants sometimes produce exceptionally heavy crops under such conditions. A ROVER.

**Drumhead Lettuce.**—I was very pleased to read the practical notes by Mr. Wytles (p. 233) on summer Lettuces. I quite agree with him as to the value of the Drumhead Lettuce. I have found it a most reliable Lettuce in Scotland for summer culture, being equally good in heavy and light soils. To produce first-class Lettuces on poor or sandy soils that dry quickly in the height of summer, I would recommend manuring and digging in late autumn or early winter, re-manuring and digging in spring. In this way the old and decayed manure turns up and is mixed with the surface soil, giving the young seedlings a quick start.—J. CRAIGIE, *Auchentoshan Gardens, Dalmeir.*

**A good summer Cauliflower.**—For sowing at this date or earlier, few varieties are superior to Veitch's Pearl, a remarkably fine main-crop variety. This variety is far superior to the Early London, nearly as large, but with a pure white curd of extremely delicate flavour. For summer use it may always be relied upon. For some years I have grown it between the rows of tall Peas, and it has never failed even in dry seasons: the heads being well covered by foliage do not open so quickly as those of Early London. If sown in March and again at this date there will be a succession of good heads all through the summer months till the autumn Cauliflowers come in. I do not advise growing it for early spring planting.—G. W.

**Frame Marrows.**—If the plants can be given a little warmth at the root and shelter overhead by frames for a few weeks there is a great saving of time and fruit can be had very early. Frame

Vegetable Marrows are a paying crop if planted under glass at the end of April and given shelter for about six weeks. I am aware many plant in frames in which early Potatoes have been raised, but there is no warmth at the roots, indeed, the reverse, the soil in some cases being impoverished and in a wet state. By re-making the bed—that is, adding new heating material—there is much time saved and the plants will furnish much better crops for a longer period. Those at all short of manure may with advantage pot on their plants and thus get strong material for planting. For this purpose, plants, if raised singly in  $\frac{1}{2}$ -inch pots and then given a shift into 9-inch ones, will show fruit freely when planted out. I do not like sowing too early, as if the plants get stunted they are a long time in making a start when planted out. It is a good plan to plant out of the seed pot if one can give the room. If only one plant is allowed to grow in a 5-inch pot, two or more seeds may be sown, thinning to the strongest, as only a little warmth is needed for a short time. It is an easy matter to dig out a small square of the old bed, refilling with new heating material, and planting in a few days. The earliest frame Marrows I have grown are Long White and Pen-y-byd. The Long White, though a large grower, is one of the earliest if the shoots are kept stopped. Pen-y-byd is a dwarfer grower and a splendid frame Marrow, sets freely under glass, matures rapidly, and when cooked is of delicious flavour. I have grown this variety in a pot and it did better than any others with restricted root space.—B. M.

**Lettuce Golden Queen.**—Rarely has there been such a scarcity of Lettuce as there is at the present time. In my case not a single plant is left from the autumn sowing, though protected by frames and grown in great quantities. Fearing what would follow the severe frost after a mild winter, I sowed Golden Queen in February in boxes and planted it out at the middle of March in frames with a little warmth. At this date (the third week in April) the plants are just turning in. This is the quickest growing Lettuce I have tried, and though small will be invaluable during the next few weeks. Golden Queen forms nice small hearts, somewhat after the Tom Thumb variety, the leaves being of a golden or very light green colour. Being a small grower, it occupies little space and is well worth frame culture. It is of a particularly delicate flavour.—S. H. B.

**Black Currant Rhubarb.**—Is it generally known that there is a variety of Rhubarb the stalk of which resembles in point of colour the juice of the Black Currant, and can anyone give the name of the variety? When going through the kitchen gardens connected with Chilton House, the Somerset residence of Mr. A. J. Goodford, I noticed several large clumps of a distinct and, to me, quite unknown variety of Rhubarb. In my estimation it fully merits the prominent position assigned it in an old-fashioned and attractive garden owing to its ornamental appearance. The variety would appear to be as early as the common early red forms, but the stalks are scarcely so stout and the leaves more acuminate. It is the colour that attracts. The rich dark crimson stalk seems to carry a heavy bloom, and this adds to the beauty of the stalks. Not only does this Rhubarb resemble the Black Currant in point of colour, but the flavour is also said to be not unlike that of the latter. It is greatly esteemed for making jam, and with the colour and flavour of Black Currant added the advance on the ordinary Rhubarb for a similar purpose ought to be unmistakable. The clumps alluded to have occupied their present position for many years past, the original roots having been received as a present by Mrs. Goodford. More than that I am unable to state, not caring to make further inquiries till I know for certain whether the variety is known to any of the readers of THE GARDEN.—W. I.

**Cabbage Early Rainham.**—This is by no means a new variety, but one that is very hard to beat for earliness, quality, and freedom from bolt-

ing. It has a remarkably good constitution, this being evidenced in several places hereabouts this spring, the plants looking strong and already commencing to heart in. In the neighbourhood of Rainham and Barking, Essex, this Cabbage is grown in large quantities for market, and I have an idea that Ellam's Dwarf is nothing more nor less than a selection of the above variety. Its table quality is of the finest.—J. C.

**Carrot Veitch's Matchless.**—For present sowing this recent introduction is superior to any variety I have grown. For some years I sowed James's Intermediate for main crop, and though excellent in many ways it is not nearly so heavy a cropper as Matchless, the newer variety being firmer, keeping better, more vigorous and doing well in soils where other sorts fail. I have grown it for three years as a main crop variety. In the dry season of 1893, in a thin, gravelly soil Matchless turned out well, other Carrots cracking badly when lifted in the autumn after rain.—S. H. B.

## ORCHARD AND FRUIT GARDEN.

### THE APPLE BLOSSOM.

THOUGH most other fruit trees are very scant of bloom, the Apples have never looked more promising. This is not only the case with old standards in orchards, but most of the young trees are also well furnished with fruit buds. The other evening I was walking through an orchard which was planted about ten years ago. The person to whom it belongs takes a great delight in his fruit trees, and though by no means a professional, is one of the few in this district who get anything like an adequate return for their labours. Last year, which was by no means a plentiful one for Apples, there was a goodly sprinkling on some of the trees. Now those who are strong advocates for close pruning would do well to visit an orchard like this; it would go a long way to convince them that though pruning is an art, those who practise it the least secure the best crops of fruit. I also visited another orchard the trees in which had been pruned in the orthodox manner, and scarcely a bloom bud was visible on some of them, so closely had the shoots been cut in. Now one would think that a lesson might be learned in this manner even by those who consider themselves professionals. Most of the Apple trees in the former orchard were grafted by the person who owns it, he having selected the Crab stock, and it is curious to note the difference in their growth, some doing remarkably well, while others refuse to grow altogether. Trees of Ecklinville which have grown to a good size produce fine crops of fruit most seasons; the wood is clean and free from any specks, with not the least sign of canker in the trees. The same may be said of Lane's Prince Albert growing close by. From these the ground slopes rapidly to the east, and on the lower side where the soil is much more retentive these varieties canker badly. Cox's Orange Pippin also does well on the upper portion of the orchard, and the same may be said of several others, such, for instance, as Pott's Seedling, The Queen, Cox's Pomona, Wormsley Pippin, Loddington, Tower of Glamis, Yorkshire Greening, and several others. The varieties that do badly are Stirling Castle, Peasgood's Nonsuch, Ribston Pippin, New Hawthornden, Cellini, Lord Suffield, Warner's King, Wellington, and some of the more tender dessert kinds. From this it would seem that when planting Apple trees even in the same orchard the more tender kinds should have the best situations. If more attention were paid to this, the robust and hardy sorts would in

one measure shelter the others. There is often a vast difference in the soil of a small piece of ground, especially in hilly districts where it slopes rapidly, for while the upper portion will in all probability be well drained, naturally that at the bottom may be quite wet, and therefore unfit for the growth of some kinds. In such places it is not only drains that are needed, but rubble of some kind should be put under each tree to keep the soil sweet.

It is too soon to form any idea of what our Apple crop may be, but from all appearance the fruit orchards will present a beautiful sight in a few weeks' time. Some of the more hardy kinds would doubtless make pleasant features if planted alongside the woodland walks where the land is suitable. Their flowers in spring, like those of the wild Cherry, Crab, and some others, would be most attractive. The Old Hawthornden and King of the Pippins would be two good varieties for this purpose, the rosy buds of the latter being very attractive.

Busted Park, Uckfield.

H. C. P.

**Freely-grown fruit trees.**—Journeying through the home counties recently, I noticed a tendency to allow a more natural freedom of growth to fruit trees. This is a healthy sign, but injury is likely to accrue from a crowded growth. This is more likely to occur with trees which have been hard pruned for years and now within the last year or so allowed to extend. By thinning out the growths so that direct light can have free access to every part of the tree, the fruit will be finer and the foundation laid for a generally fruitful habit. In any case where the growth is crowded surplus shoots could now be cut away. If this is done carefully there need be little or no fear of damaging the buds.—Y. A. H.

**Peach Amsden June.**—It may interest some of those who have been bothered with the uncertain character generally of most of the American Peaches to learn that Amsden June can be depended on. For some years past I have grown Amsden June on the open wall, where it does capitally, ripening at the end of July. Acting on the advice of Mr. Wythes, of Syon House, with whom it does well, I last year planted a tree of this variety in a span-roofed house, and although the tree cannot yet be said to be established it is bearing a nice lot of fruit, which is well advanced and has every appearance of going on to maturity. The fruit is of good size and splendid colour, the flavour also being good. I grow Waterloo and have grown Alexander, but neither of them is so early as Amsden June. Those who want extra early Peaches should give Amsden June a trial.—J. C.

**Blister on Peach trees.**—I think it has, as stated by "W. G. C." (p. 276) been proved that what is known as "blister," which appears upon the foliage of Peach trees, is of fungoid origin, such attacks being aggravated by the cold winds and low temperature of early spring. These conditions appear to be necessary for the fungus spores to develop. Its hereditary tendency is also, I think, proved, and in many gardens the source of blister has been traced to a single tree, perhaps purchased from a nursery where this blister fungus was prevalent. As evidence of this I will give a case in point, and which was vouched for to me as a fact by a well-known gardener and fruit grower. In the garden which he had charge of, trees purchased from a nursery where the fungus was known to be, perpetuated the evil as each season for its occurrence came round, but it was entirely destroyed when clean trees were procured from another source and the older trees cleared out and burned. In this garden blister is comparatively unknown: at least, during the past nine years I may have pulled off two dozen leaves, but, strange as it may appear, these affected leaves appear about the same part of the wall annually in the direct line of cutting winds, and which

the protecting cover does not quite reach. I have never tried any fungicide for blister, as this has never been needed, but if this is a sure cure, blister should be stamped out of every garden where it is tried and used. I have never seen blister in unheated houses or under wall eases, which gives me the impression that with clean trees to start with and effectual covering afterwards, blister should not prove troublesome. Trees which are crippled in the earlier stages of growth, whether through blister or insects, however clean and free the growth may be afterwards, will never produce satisfactory crops of fruit.—A Young, *Abberly Hall*.

#### APPLE KING OF THE PIPPINS.

No dessert Apple is better known than the above, and it is more widely cultivated than any other sort that I know of. In some parts of England and also in portions of Scotland and Wales it is best known as Prince's Pippin, but under whatever name it is grown it is very popular, the tree being very prolific on almost all soils, very hardy, and under good management the flavour of the fruit is excellent. In some of the most suitable parts of the country for hardy fruit culture the quality of King of the Pippins is all that can be desired and only second to Cox's Orange and Ribston Pippins, but it is infinitely superior to both



*Apple King of the Pippins.*

in productiveness and healthy, vigorous growth. In some of the western counties, especially Herefordshire, the variety has been extensively planted for many years, the majority of large and small gardens, also orchards, having a few trees therein which rarely fail to crop well, or if they do fail, it arises from exhaustion following a very heavy load of fruit. When trees of King of the Pippins are supplied with copious quantities of liquid or solid manure the season must be a bad one indeed if no fruit is forthcoming; in fact, I have yet to see such trees fail entirely, which is more than I could state of any other variety. This being a fact, it is marvellous that planters, both for home consumption and for market, do not plant more of such a sterling variety. It may perhaps be stated by market growers that there are more profitable varieties of Apples than King of the Pippins. While admitting that there are cooking varieties that are more remunerative, I must confess to not having yet grown any dessert Apple that will pay so well over a series of years. Taking the past ten years' prices, I find the average comes out at a little over 14s. per cwt., and as many bush trees under skilled management on good soils will easily produce from  $\frac{1}{4}$  cwt. to  $\frac{1}{2}$  cwt. of fruit per tree, it may soon

be calculated what the returns should be in fruitful seasons from an acre of land. There are so many absolutely worthless varieties of Apples, that both large and small growers should set their face against planting any sorts but those that are known to be really good all-round varieties, such as the one now named. Another advantage possessed by King of the Pippins is its popularity in all markets, as nicely-coloured and properly graded fruit will command equally satisfactory prices in the northern or southern markets. In this respect it differs from Cox's Orange Pippin, which is practically of no value in the north and realises a very high figure in London.

As many trees of King of the Pippins will now be in bloom, or setting their fruit, I would suggest liberal treatment at the roots to assist to the utmost the efforts to produce a crop. Natural manures are excellent, as they are a complete plant food and supply all the elements necessary to plant life; but, unfortunately, many gardeners and others cannot obtain sufficient of this fertiliser, and are obliged to rely on so-called artificial manures, when there can be no question as to their great usefulness and feeding power if judiciously applied. By applying now 2 cwt. of muriate of potash and 3 cwt. of superphosphate, well mixed together, to each acre of

land devoted to Apple trees, the trees will be much invigorated, and of course the fruit will derive benefit as well not only in size, but later on in colour. Our soil is moderately light, and since using the above manures the Apples of all varieties have shown a marked improvement; but I think none have shown it in so great a degree as King of the Pippins, the colour especially being fine and the flavour rich and juicy, making it valuable for all purposes about Christmas.

W. G. C.

#### Strawberry Gunton Park.—I

have this season forced this new Strawberry, and consider it a valuable acquisition. Growing about one hundred plants, the runners having been secured from maiden plants early in the season, I was enabled to form a better idea as to cropping qualities than from plants purchased late and which may have borne a crop. The fruit of this variety is of a brisk, pleasant flavour and fine colour, and when well grown comes of a large size; indeed I consider it one of the most handsome Strawberries grown. It forces well and sets so freely that it requires severe thinning. The flesh is firm and the fruits may be sent a long distance, arriving in fine condition. The plants resemble La Grosse Sucrée in cropping, and the fruits swell so evenly, that there are very few small ones. I intend this season to secure all the runners possible and to grow Gunton Park largely.—G. W.

**Planting Figs in the open.**—Many have ceased to grow Figs on walls on account of their failing to crop freely. Barren trees could be made fruitful if more attention were paid to thinning the shoots in the growing season and keeping the roots under control. In planting young trees the roots should be carefully spread out, and as pot trees are the best for planting, select those with leaders. Plant in good loam, with a liberal portion of old mortar rubble, wood ashes, or burnt garden refuse. To promote a fruitful growth restrict the border by only allowing a certain space, and to do this, tiles, bricks or slates may be employed. Plant firmly and water freely as growth increases, giving a mulch of spent manure at midsummer. Figs could be grown on many

walls if the trees were looked after in the way of laying in new wood yearly, not shortening the leading branches. The fruit being produced at the end of the shoots, these if cut back only produce wood. It is a good plan in the late summer to shorten back a certain number of shoots by pinching and to leave sufficient leaders to extend the trees. These at this season may be laid in, merely removing barren growths.—G. W.

**Grape Bowood Muscat.**—I read some time ago (I think from the pen of the veteran Mr. Douglas) remarks on Bowood Muscat, and whatever may be said to the contrary I believe the variety so named is distinct from the Muscat of Alexandria. I was an underling in Wiltshire when that Muscat was brought to notice and sent out by the late Mr. Spencer. I saw in one house over two thousand growing, and was told they were all practically sold. Many experienced growers admitted that it was distinct, some giving it other names, but I know that many cultivators did not see the distinction, and classed it with M. of Alexandria. I know some nursery friends who have sold the Vines under different names, but believed they were alike. I have grown it (Bowood Muscat) when the stiff habit of bunch, free setting, and hardier constitution were very pronounced, and were easily noticed among the M. of Alexandria by the most casual observer. I planted two Vines of it here, but probably they were propagated from the same Vines which supplied the M. of Alexandria. A short time ago I visited a Forfarshire garden where a Vine under the name of Bowood Muscat appears to be remarkably distinct, and the intelligent gardener in charge said that every year the habit of Bowood Muscat was dissimilar to that of the M. of Alexandria in the same house. Mr. Murray, gardener at Parkhall (who is one of the most extensive Grape growers in Scotland), holds that there are distinctive habits in the two Vines, but I fear that this is a matter which now cannot be cleared up. The Cannon Hall Muscat, though not equal to the Muscat of Alexandria for flavour, is much larger in berry, and when grown, as by Mr. Kay at Finchley, worth going many miles to see.—M. TEMPLE, *Caron, Stirlingshire.*

**Liquid manure for fruit trees.**—The advice given by "E.M." (page 276) concerning the application of liquid manure to the roots of established Apple trees is worthy of notice. Many people who have orchards might get double the quantity of fruit and of an infinitely better quality by pouring the liquid from the farmyard around their Apple trees instead of letting it go to waste. House sewage is most valuable for the purpose, but where the orchard is grass-covered it should be diluted considerably, or it will kill the grass. In an orchard a few miles from here, where the trees were very old and showing signs of exhaustion, house sewage was applied during the winter, with the result that fine healthy growth and abundance of large fruit were produced the next season. Farmers in particular who have plenty of horse and cow urine might preserve their orchard trees in a fruitful and profitable condition by its judicious annual use, and that, too, without a great deal of labour. All orchards are further improved by being surface-turnd previous to the liquid being applied. This admits air and warmth the following spring, and induces the roots to come to the surface. I have no doubt that all kinds of hardy fruit trees would be equally benefited by the same treatment, also Vines. If, however, the border in which the latter are growing is composed of strong loam or is at a low elevation, injury might ensue from the winter use of liquid manure.—J. CRAWFORD.

**Strawberries forced in boxes.**—For some years, when I lived where timber was readily procured on the estate, I made it answer well in the case of Strawberries for the May and early June supply, and never had better fruit and with less labour. The boxes were made during the winter, the material being rough Larch wood cut by machine into strips 6 inches wide and an inch thick. The boxes were 6 inches deep when made, and six plants were placed in each

box, the length being 2 feet 6 inches by 12 inches wide. Narrower boxes, with only one row of plants, would be advisable for narrow shelves, but I grew the plants on stages in pits and the size named just filled the standing space, and the boxes, if not required for Strawberries, were useful for other things. By growing plants in this way there is not the continual drying as when in pots and the fruits are of excellent flavour. I do not advise this mode of culture for early forcing, but for the season named, and if the boxes can be placed end to end close to the glass in frames with space between the sides, a lot of fruit may be grown in a small space. It is necessary to stake the trusses of fruit, to thin early, and feed liberally. The boxes require very little drainage, and during growth, after being planted, should be stood on a rack or strips of wood to allow of moisture draining away freely. For boxing I never used pot plants, but layered the runners into square pieces of turf, the latter being let into the soil or bed with a trowel when layering. These runners did well when placed in the boxes, and the boxing was much sooner finished than potting. I grew other plants, such as French Beans, Potatoes and Peas, but with the first-named used narrower boxes and one row of plants.—G. W.

#### NOTES ON VINE CULTURE.

GARDENERS are very busy at this time of the year in the vineries, and it depends much upon the treatment the Vines receive as to whether they will produce handsome bunches and large berries with good bloom upon them. All the houses require attention, and as I write these lines there is a keen east wind blowing, but at mid-day the sun has power enough to raise the temperature to a high point. Air of course has to be admitted, but it ought only to come in from the opening at the top of the house: it is better that the sidelights should remain closed. In one of our houses the Grapes are being thinned, and at such a time the berries may become rusty—as gardeners term the discoloration and contraction of the skin. "How is it caused?" I am asked. I believe by careless handling of the berries, touching them with the hair of the head when thinning, or opening the front and top ventilators at the same time. This is sometimes done to make it pleasant for the person thinning during hot sunshine, but the cold east wind at such a time will do its work of injury. Thinning should if possible be done in the cool hours of the morning, and the smallest opening at the top of the house will admit sufficient air to make the atmosphere and temperature agreeable. In the second house the shoots ought now to be tied out, and stopping the growths should be frequently followed up. This is an important part of the culture of the Vine in the early stages of its growth. When growths are not wanted they should be stopped when they are 1 inch or 2 inches in length. All the stoppings from a good-sized vinery may be compressed into two or three handfuls if the work is done in good time. Some growers allow the laterals to run into shoots a yard or more in length before they are cut off. This cannot fail to be injurious to the Vines, by checking to a serious extent their growth. Stopping should be persistently followed up until the Vines have reached the flowering stage, when it is best not to interfere with them until the setting period is over. It does not matter much as to the treatment of the Black Hamburg or other free-setting varieties, but the Muscats and other shy-setting kinds may receive some sort of check which might have an injurious effect upon the setting of the blossoms. At setting time I raise the temperature about 5° and keep up a rather dry atmosphere—not excessively dry, for the paths and borders are sprinkled daily. Thinning the fruit should be commenced about ten or twelve days after it has set. Muscats require a little artificial aid, but if the weather is fine it is sufficient to shake the rods daily. It can be done by striking the wires with a hoe or a rod of some kind, and the pollen will be seen like a cloud of

dust. If red spider appears, heat and sulphur the pipes, but it must not be done too early, else the effects of it, if strong enough to kill the spider, will also injure the tender skins of the fruit and cause rust. J. DOUGLAS.

## FLOWER GARDEN.

### CHRISTMAS ROSES FAILING.

At page 77, Mr. J. Wood says in reference to the above that he should "feel very grateful for the views of those who have studied the subject," and somewhat earlier your correspondent refers to the niger section of the genus *Helleborus* being in some districts unmanageable. Mr. Wood does not say where the difficulty comes in, or whether the plants thrive for a while or the reverse, and then dwindle away ever after. So far as my own experience goes in the cultivation of these Christmas Roses, I believe one of the most frequent sources of failure to be due to planting and transplanting them at the wrong season. Mr. Wood has very correctly alluded to the differences between these and the so-called Lenten Roses. The latter may safely be planted in most gardens in the spring with the best results. The plants may be divided and replanted in March or April, and given quite ordinary care they grow and flourish freely. This fact is, I believe due in the main to the continuous formation and production of fibrous roots. And here they differ materially, so far as my own observation goes, from the Christmas Roses proper. My own opinion of the proper time for planting these latter is the month of September, early or late according to the season.

I believe that in the niger section of *Helleborus* the main roots are sent forth annually in late summer or early autumn, and only at this time so far as our garden examples are concerned. The object of planting at the time stated then is obvious. I am well aware that in some instances these Christmas Roses are planted with success at other times than those above named, but these are exceptions. If anyone interested will lift a healthy plant late in August, he will in all probability find these new basal or main roots just ready to emerge from the crown in immediate proximity to the spot from whence the current season's growth sprang. To save all such roots intact, and particularly in those instances where one set only is produced annually, is to my mind an important matter to all who would covet a full measure of success. In large specimens these main roots descend into the earth from 2 feet to 3 feet where the soil is good and permits; indeed I have traced them to even a greater depth in very large plants. This at once shows the necessity of a very deep bed. Twenty years ago I had charge of a quantity of grand specimens of the variety major nearly 3 feet across, and when in flower the blooms from each specimen could not have been closely placed in a bushel basket. These plants were grown in cool, fairly moist beds of prepared soil in a sheltered garden, and benefited by distant shade. In the early part of the year, probably when the young foliage is being made, fibrous roots are produced on the main fleshy roots. And in this connection I have observed that these fibres are more numerous on lifted plants than on those not periodically disturbed. For example, those plants lifted late last autumn and placed in boxes or pots for flowering will produce greater numbers of these root fibres this year than is the case with plants not disturbed, but which sent down their roots without any check what-

ever, and it is just this fact that carries the lifted plants over till the ensuing autumn, though by comparison it will be seen that the crowns have suffered to no small extent, and are generally undersized and weakened. This fact I think clearly proves their dislike to frequent disturbance.

Another fertile source of failure in these plants is smoke and close proximity to large manufacturing towns, especially where chemicals are in strong force. In these districts the foliage is early ruined and roots are only sparsely produced. It is a good sign when these Hellebores carry the bulk of their foliage through the greater part of the winter, for there cannot possibly be more positive proof of their perfect health. Much exposure to sun in districts where the soil is light, very sandy, or stony assists in the same direction. In the neighbourhood of Bath, and generally throughout Gloucestershire, Christmas Roses do surprisingly well. The soil generally is of a clayey nature, and in the latter frequently overlying blue lias clay.

Shade in the culture of these plants, especially in light soils, has an important bearing in respect to retaining the foliage. Some years ago I planted a series of hedges of oval-leaved Privet at about 8 feet apart to afford shelter for these Christmas Roses. The plants were hemmed in on all sides save an entrance 2 feet wide. The soil was fairly good, though much lighter than I could have wished. In all cases nearest the base of the hedge, regardless of the direction it faced, and notwithstanding the frequent excessive dryness of the soil by reason of the mass of roots from the hedgerow, the plants were always the most vigorous, and always without exception retained the foliage fresh through the winter; while the manner in which those plants farthest removed from the shade lost their leaves afforded additional proof of the great value of shade of a given kind in the culture of these plants. And it was precisely the same with Hepaticas under the same conditions, thus showing they preferred a similar treatment.

Never transplant these Christmas Roses bodily in huge masses. The old roots apparently have no power to take fresh hold on the soil, no matter what the compost, and the result is they very quickly decay and speedily rot the whole plant if allowed to go on. The soil which seems to satisfy these plants most is a good depth of fairly sandy loam. E. JENKINS.

Hampton Hill.

**A beautiful churchyard.**—There are to be found here and there, in out-of-the-way corners of England, churchyards that possess a restfulness of their own quite apart from the associations of the headstones and "grassy barrows" of the departed; but there can exist few more ideal gardens of sleep than the God's acre at Gulval, lying within sound of the Cornish seas and in sight of the grand outline of St. Michael's Mount, yet far enough withdrawn from the ocean's verge to be embowered in the verdure of sheltering Elms. *Dracenas* and *Phormiums* are growing within the lych gate and a climbing Rose endeavours graciously to hide, with budding sprays, the Latin inscription on the sun-dial above the porch, to the effect that "time is the devourer of all things," which effort will soon be ably seconded by a *Solanum jasminoides* that is breaking strongly close by. Trees of the old *Fuchsia Riccartoni* show their sprouting branches above *Pittosporums*, *Camellias* (red and white), scarlet-berried *Aucubas* and giant *Hydrangea* bushes; while the *Bamboo* and *Cistus* tribes are also well represented. Flowering *Cherry*, *Deutzia* and *Kerria* are only less conspicuous than the pendent wealth of the *Orange* blossoms of *Berberis Darwini*. Here a cluster of

the fair white *Poet's Narcissus* nods above a grave; here the *Forget-me-not* has spread an azure pall; here a loving hand has planted a colony of *Lilies* of the Valley, which will soon be bending white, perfumed bells over the sod. *Anemone fulgens*, a brilliant patch of scarlet, glows amidst the green, and yellow *Daffodils* with purple *Hyacinths* add their tones to the picture. The mistake of over-scrupulous neatness is not made. The shears and the foot-rule are, evidently, not for ever in request. Nature is allowed, within certain bounds, to order her own goings. The spot is a beautiful one now. On summer evenings, with the long shadows of its Elm trees and the scent from the great *Rose* bushes, blossoming profusely from

the attacks of the disease, even when growing side by side with badly-affected bulbs.—S. W. F.

### CHAMÆROPS EXCELSA IN DEVONSHIRE.

THERE are many gardens where this hardy Palm will grow well, its essential requirements being an open, well-drained loamy soil and a position sheltered from wind. A large number of fine specimens may be met with in the south and west of England, assuming that they have all withstood the terrible winter. In this respect it would be interesting to hear how they have fared, for although it has long been proved that they could withstand our average winters, a few extra degrees of cold often commit sad havoc among exotic things not absolutely hardy. The two fine specimens at Heckfield, for example, are in a much more exposed situation than most of those we have met with, one of which, growing in a small back garden in the town of Midhurst and perfectly sheltered, was luxuriant in leaf and flower at the time we saw it.

Mr. C. M. Mayor, who kindly sent us the photograph from which the illustration was prepared, writes as follows:—

The *C. excelsa* and *Dracæna australis* were two very beautiful plants, but the latter has since been much spoiled by the snow of winter 1893-94 being allowed to remain in the crowns. The cold does not seem to affect it so much, as if the tops are killed the stems break freely all the way up, but snow should always be shaken out. Both plants flowered freely. They are planted on the top of a sloping garden, aspect S.E. *C. excelsa* and *Fortunei* make splendid lawn specimens. In this district there are several fine plants of both that have stood well, even last winter, but nearly all the *Dracenas* are without their tops.



*Dracæna australis* and *Chamærops excelsa* in Mr. C. Mayor's garden at Paignton, Devon. From a photograph by Miss Hunt, Southfield, Paignton, Devon.

every shoot, in the air, it will attain an even greater measure of beauty and of rest.—S. W. F.

**Basal-rot in Narcissi.**—This disease seems to be more prevalent among the native varieties of *Narcissi* when grown in beds than when left to themselves in woods or grass. I lately had the opportunity of inspecting a large collection of *Narcissi* in which a good many bulbs of *N. obvallaris* were affected, but one bulb which had found its way into a rough grass plot was growing as strongly and healthily as could be desired. I have seen more than one instance, in the south-western counties, of varieties of *Narcissi* failing when grown in prepared soil, and regaining their health when relegated to the orchard. The heavy trumpet section, such as *Emperor* and *Empress*, as far as my observation goes, seems able to resist

are cased and balled is common earth cut from the mountain sides under the surface soil, which is of a black, porous nature. Water is then added, and it is kneaded well with the naked feet until it becomes tenacious. This is used for balling. The casing material is the same earth, well pounded and dried in the sun.—JAMES CARTER & Co.

**Double Violets.**—At p. 268 "J. C. B." recommends the variety *Queen Victoria* as a substitute for the old *Neapolitan* where this favourite does not grow satisfactorily. I shall be pleased to try *Queen Victoria*, as the *Neapolitan* does not do so well in our district as it does in the south. Has "J. C. B." tried *Lady Hume Campbell*, a splendid variety, and also a capital substitute for the *Neapolitan*? I have grown it for several years and

**Cases for Japanese Lilies.**—The kind of wood from which the bulb cases are made is *Abies firma*, and the soil in which the bulbs

have found it most useful. It has a very hardy constitution, and although of dense growth is not at all liable to damping off in winter as are Marie Louise and some others. The flowers, which are produced in great quantities, are of a beautiful pale blue shade. It has also an additional good trait in its character, that of blooming later in the spring than Marie Louise, no small advantage where a supply of Violets is required as long as possible. "J. C. B." speaks of the difficulty experienced in keeping off red spider. It usually affects my plants but little. This, I think, is mainly due to the position the plants occupy, a deep root run, mulching the surface of the bed, daily summer and frequent evening syringings from the garden engine, occasionally stirring a little flowers of sulphur into the water. Formerly old Violet growers gave their plants a north aspect, and certainly many of them grew the old Neapolitan well, as the more easily-cultivated sorts such as Marie Louise were not then in existence. I think, however, that a position where the sun shines on the plants for a few hours in the morning is best. This strengthens without distressing them. Where the plants are grown on a south or even a due west border spider is always very troublesome, and the growth, in my opinion, is not so satisfactory. Of course in northern counties the case might be different.—J. CRAWFORD, Newark.

#### NOTES ON CROCUSES.

SURELY there is no race of plants that will give more pleasure than the genus *Crocus*. From the early days in September to the middle of April they may be had in flower, in less variety as the days shorten, and increasing in wealth of colours and kinds as the days become longer and brighter. The first to flower is *C. speciosus*, a well-known kind, whose rich blue flowers with their distinct orange-scarlet anthers emit a most delicate perfume. A very fine variety of this is *C. speciosus Aitchisoni*, which was distributed by Herr Max Leichtlin, of Baden-Baden, some years ago. These two are closely followed by *C. autumnalis*, dark purple-blue, *C. sativus*, medium, and a form of *sativus* called *Pallasi*, which has pale lilac flowers, and produces long, fine grassy foliage in early winter. *C. Boryi* is a beautiful white-flowered kind. *C. nudiflorus* has blue flowers, and mention must be made of its pretty white-flowered variety. I have also seen a form of *nudiflorus* with flowers of a most unique shade of flesh-pink. A charming kind is *C. iridiflorus* with its var. major, colour rich blue. *C. cancellatus* var. *cilicicus* is a rare form with large flowers of a delicate lilac blue. These, I may say, close the list of the autumn flowering kinds, but there is no break in the season, for the winter varieties begin when the others leave off. *C. longiflorus*, lilac-blue, is the first, closely followed by *C. hymnalis*, white, with intense black feathering on the outside of the segments; *C. tingitanus*, pale lilac; and *C. Fleischeri*, a creamy white with dark feathering. *C. vitellinus*, which throws up quite a bunch of rich golden flowers, is a true midwinter species. *C. chrysanthus* and its form *fusco-tinctus* are also yellow. *C. Sieberi* has flowers of a distinct shade of blue and is extremely pretty; it has a purple var. *C. Obesi* has a large flower of intense whiteness, with most distinct orange-scarlet anthers. *Crocus Imperati* comes after the dark winter days. Its quaint colouring of lilac-buff and almost black feathering are very beautiful, and the flowers are delicately sweet, but it is surpassed by a variety called *C. Imperati longiflorus*, in which the flowers are larger and the colouring much darker. A lovely form is *C. Imperati albus*. *C. Kotschyanus*, of a delicate shade of pale lilac, outside white; *C. Aucherii*, rich golden yellow; *C. vallicola*, a most delicate flower, the colour scarcely definable; *C. Mæsiacus*, *C. aureus* and its vars., *ochroleucus*, *susianus*, *sulphureus*, are all of various shades of yellow. *C. Weldenii* has whitish flowers with a delicate shading of blue on outside, also *C. dalmaticus violescens*, though *dalmaticus niveus* is

pure white. *C. biflorus* and *C. biflorus argenteus* bear masses of flowers of silvery whiteness with dark feathering. *C. arvensis* is a pretty little kind with deep blue flowers which change to lilac. *C. carpetanus*, *C. Cartwrightianus albus*, *C. Danfordii*, *C. neapolitanus*, *C. odoratus melittensis*, *C. peloponesiacus*, *C. Tournefortii*, *C. veluchensis*, and *C. versicolor* var. *obscurus* are scarcer kinds all with a charm of their own. I need not mention the usefulness of the ordinary Dutch kinds, forms of *C. vernus*, as they are too well known to need comment. All these beautiful and interesting kinds of *Crocus* are of very easy culture, growing well in any ordinary garden soil, but it is well when planting to surround the bulbs with some fine sand. They are specially adapted for little warm nooks, narrow sunny borders, or just inside the edges of herbaceous borders. It is not necessary to lift them every year; they may be left for three or more seasons until the clumps become too crowded, but care must be taken, as mice are extremely partial to them. Some of the more plentiful kinds, such as *speciosus*, *Imperati*, *biflorus* and *versicolor*, are excellent for naturalising in grass. G.

### SOCIETIES AND EXHIBITIONS.

#### AURICULA SHOW.

APRIL 23.

THE Auricula growers had their annual field day at the Drill Hall on April 23, and their exhibits, which were much more numerous than many expected, having regard to the lateness of the season, materially added to what was a very attractive exhibition of plants and flowers. Despite the severity and prolonged character of the winter, it was one of the largest and best exhibitions of Auriculas yet held by the Society. Everybody admires what we may term the Jewelled Auricula—the beautiful and fascinating green, grey, and white edges and the striking selfs, but they can be grown to perfection only by a few. Choice as it is, the show Auricula is a hardy plant—there is probably not a collection in the country but what was frozen hard for many days during the severe weather in the early part of the year, and yet, as soon as the change came, the plants leapt into life and came on at a rapid pace. A little warmth was, no doubt, applied in a few cases to have the plants ready by a certain date, but there was no evidence of their having been drawn; they were in many cases examples of careful culture. The largest class is for fifty Auriculas, but it is high time it was got rid of. It was instituted in the early days of the Society in order to assist the show when exhibitors were few, but now that they are many the necessity for the class no longer exists, and it may be said to include all those flowers which are not good enough to go into the other classes. Mr. James Douglas, gardener to Mrs. Whitbourn, Great Gearies, Iford, was, as usual, placed first, most prominent being three or four yellow selfs, one particularly fine, and Rolt's green edge, which has a red instead of a black body colour, while edged and self flowers were abundant. Mr. A. J. Sanders, gardener to Viscountess Chewton, Brockham, was second, and the Guildford Hardy Plant Company was third, in this collection being a plant of the Rev. F. D. Horner's yellow self Buttercup. Two other collections of fifty were unplaced. The blue riband of the Auricula Show is the first prize for twelve varieties, Mr. T. E. Henwood, of Reading, winning it easily. We give the names of the varieties because they represent a choice selection. They were: Green edges, Prince of Greens, the Rev. F. D. Horner, Abbe Liszt, and James Hannaford, and of these the Rev. F. D. Horner is decidedly the best, but it would be much better if it opened its pips a little flatter, and so did not cup so much. Abbe Liszt is not a true green, as there is a beading of meal round the edges of the segments; but it appears to be a good grower. James Hannaford was coarse and the body colour confused. Of grey edges there were

Lancashire Hero, almost a green edge, Richard Headley, very fine for so early in the season, and George Rudd; of white edges, Acme, undoubtedly the very best when in good condition, and John Simonite; of selfs, Mrs. Potts, the best blue, Black Bess, the darkest, and Heroine. Mr. A. J. Sanders, who is taking a leading position as a successful exhibitor, was second, and Mr. Patterson, who came all the way from Sunderland, third. Mr. Sanders had the best six, having the grey edged George Lightbody as distinct from the before-mentioned, Mr. Henwood taking second place, and Mr. Patterson third. There were several collections of four varieties, and Mr. Sargent, Cobham, who was first, had Rachel, a pleasing grey edge. Mr. W. Smith, Bishops Startford, who had Mr. Dodwell, a white edge, very chaste when in good character, was second. Mr. Sargent had the best two out of nine pairs. Abbe Liszt was selected as the best green edge, George Lightbody as the best grey, Marmion as the best white edge, and Cherub, a dark flower raised by Mr. Douglas, as the best self.

The alpine varieties were numerous, brilliant, and striking; but seeing what a number of new varieties is constantly being raised, is any real progress being made? The notch still disfigures the segments of some; the pistil still protrudes above the anthers, making the flower "pin-eyed," a sad defect in the estimation of the northern florists; and quality appears to be in danger of being sacrificed to mere size. Mr. Charles Phillips, formerly of Reading, and now of Bracknell, Berks, was first with seedlings of his own raising, a very fine strain indeed, remarkable for high quality; Mr. Douglas was second. With six varieties Mr. J. Douglas was first; Mr. Phillips taking the second place; and Mr. C. Turner third, though some thought the first and third positions should have been reversed. Little Gem, Mrs. Gorton, Dragon Fly, Mrs. Martin Smith, Dot, Sophie, Dean Hole, Winifred and Chastity were some of the best alpine. There was a class for four varieties also, Mr. W. L. Walker, of Reading, being first; and classes also for one plant—golden centred and white or cream centred. Some of the varieties staged in the latter class were clearly inadmissible, being yellow rather than creamy or white.

The gold-laced Polyanthuses were mainly seedlings of indifferent character, but as the named varieties went down before the frost, growers were sadly put about for material. There is ample room for improvement in this refined type, if someone would set about it. Two or three old varieties, such as William IV., Napoleon, and Formosa, were exhibited, but they were decidedly poor and are rarely very good.

Brilliant patches of colour were afforded by the fancy Polyanthuses and Primroses, though the Drill Hall is by no means a fitting place on a dull day in which to show them off to the best advantage. Mr. Richard Dean, Ranelagh Road, Ealing, was first with twelve large pots of fancy Polyanthuses, some very brilliant in colour and of fine quality, a golden hose-in-hose form being particularly attractive. Mr. A. J. Sanders was second, and Mr. J. Douglas third. With twelve pots of Primroses Mr. R. Dean was again first, brilliant colouring and fine flowers making a rare display. Mr. J. Douglas came in second, and Mr. A. J. Sanders third. There was no entry in the class for six double Primroses, but in the class for a basket of single Primroses, Mr. J. Douglas was first, though there was scarcely a true Primrose among them, and Mr. R. Dean second.

Fancy Auriculas may be described as embracing anything that does not find a place in the orthodox classes. Among seedlings of the show kinds there are many curious flowers, mainly yellow; laced and double varieties are also included. Mr. Douglas was first, the Hardy Plant Nursery Company, Guildford, second, and Mr. R. Dean third.

Species of Primulas were very fine on the whole, Mr. J. Douglas being the only exhibitor of twelve pots or pans. He had fine examples of *obconica*, *japonica*, *verticillata*, *floribunda*, *Auricula*, *denti-*

culata, intermedia, Forbesi, mellis, decora, rosea, and a somewhat poorly bloomed specimen of laciniata, one of the forms of *P. Sieboldi*. Mr. Douglas was the only exhibitor of a group of species and varieties, these being charmingly arranged in the form of a piece of natural rockery; the subjects repetitions of those mentioned above interspersed with various types of Auriculas, Primroses, &c.

The Premier Show Auricula was a good example of George Lightholy. It was shown by Mr. Collins, gardener to Mrs. Kyrke-Penson, Dinham Castle, Ludlow.

Several new show Auriculas were staged. A special prize of one guinea offered by Mr. W. Smith, of Bishop's Stortford, for the best seedling show Auricula, an improvement on existing varieties, was awarded to a dark self named Favourite shown by the Rev. F. D. Horner, the pip large, smooth, and beautifully formed. Mr. J. J. Keen's special prize of one guinea for four seedling Auriculas, one of each class, was awarded to Mr. J. Douglas, who had Peri, white edge, an unnamed grey and white edge, and a dark self.

Prizes were awarded to two seedling self Auriculas, viz., Favourite (Horner) and Mr. Barnett, also a dark variety, shown by Mr. C. Phillips; it is something in the way of Heroine. Some finely flowered plants of the old double crimson Primrose were shown by Mr. J. Douglas. A group of fancy Polyanthus and Primroses was also staged by Mr. R. Dean.

#### ROYAL BOTANIC.

APRIL 24.

THE exhibits at the second spring show of the Royal Botanic Society on Wednesday were decidedly more numerous, entirely filling the long corridor, and many were placed in the conservatory. There was not much competition for the prizes, but miscellaneous exhibits were of a most interesting character. Messrs. Paul and Son, of Cheshunt, were first for a collection of Roses in pots, the finest specimens being Celine Forestier, Mme. Hoste, Mrs. John Laing, Caroline d'Arden, Beauty of Waltham, Margaret Dickson, and Magna Charta, all carrying many fine flowers. Mr. W. Rumsey, of Waltham Cross, was second. The only exhibit in the class for a collection of hardy plants was that from Mr. T. S. Ware, a good lot, well meriting the first prize. The best things were *Dielytra specabilis*, red and white, *Doronicum*, *Adonis vernalis*, *Ranunculus alexandrinus*, a pretty white-flowered Buttercup, *Geum montanum*, dwarf, a perfect mass of yellow flowers, *Anemone fulgens*, *A. Robinsoniana*, *A. Pulsatilla*, *Orchis fusca*, and a very fine pot of the American Dog's tooth Violet (*Erythronium americanum*). Mr. Douglas sent the only collection of hardy Primulas and received first prize, but there were several decidedly greenhouse species in the exhibit, as, for example, *P. verticillata* and *P. floribunda*, the former named in good free-flowering specimens. *P. Forbesi* attracted much notice, and other good kinds were *P. mollis*, *P. auriculata*, *P. rosea*, *P. japonica*. The best group of Auriculas also came from Mr. Douglas, the plants carrying large trusses of flowers, Mr. Turner, of Slough, being second. For greenhouse Azaleas Mr. W. Barrell, gardener to Mrs. Thornton, The Hoo, Sydenham Hill, was first with a fine lot, showing large, informal bush specimens covered with bloom. The best were Roi d'Hollande, deep red; Dr. Livingstone and Medel, both deep rose; and Magnifica, white. Messrs. Paul and Son were awarded first for a group of Amaryllises, but the second prize lot from Mr. Douglas, though less in numbers, was better as regards purity of colour. Mr. Douglas was the only exhibitor of Cinerarias, and received first prize for a charming group of dwarf freely-flowered plants. A nice lot of Pelargoniums from Mr. C. Turner, of Slough, secured first prize, about twenty-five plants being shown, all well flowered. The best were Purity, a lovely white kind, without any marking; Resy Morn, deep self-

rose; Magpie, white, with conspicuous blotches; Edward Perkins, bright crimson; and Mystery. Begonias from Mr. T. S. Ware were good for so early in the season, the group being relieved by a few Palms and Grasses. The double-flowered kinds predominated. Brilliant, bright red, and Pieotee being good. Among single-flowered varieties, Murillo, dark crimson; Bexley White; Perfection, orange-red; and Regina, white, edged with pink, were the best. Mr. R. Scott, gardener to Miss Foster, The Holme, Regent's Park, was first for a group of Imantophyllums, with large, free-flowering specimens; also first for *Spirea japonica*, showing twelve large plants, well grown and freely flowered.

Among miscellaneous exhibits was a large group from Messrs. Hugh Low and Co., Clapton, consisting of Orchids, chiefly Cymbidiums in fine specimens and Cattleyas, Cannas in variety, and many beautiful New Holland plants now not often seen, as *Correa cardinalis*, *Chorozema Lowii*, *Eriostemon*, *Boronia*, *Genista elegans*, *Acacias*, *Ericas*, and *Epacris*. A silver medal was deservedly awarded. Messrs. J. Laing and Sons, of Forest Hill, arranged a beautiful group of flowering and fine-leaved plants, consisting of Palms, Dracenas, Ferns, and Caladiums, with Orchids, Begonias, and Clivias. A silver medal was awarded. A smaller group from Messrs. J. Peed and Sons of similar plants, with well-flowered examples of *Genista Andreana*, was awarded a bronze medal. Messrs. J. Veitch and Sons sent an interesting group, containing blue Primroses in variety, *Glonera jasminoides*, a well-flowered plant, *Epiphyllums*, *Rhododendron Forsterianum*, *Dendrobium Aspasia*, *Cypripedium Creon*, and *Laelio-Cattleya Epicasta*. Cut Roses were largely shown, Mr. Frank Cant, of Colchester, having many varieties of Teas and H.P.'s, the flowers large and good in colour. Especially fine were Ethel Brownlow, Mme. Cusin, C. Mermet, Ernest Metz, Cleopatra, and Maréchal Niel among Teas, and Mrs. J. Laing, Ulrich Brunner, Duke of Edinburgh, and Mme. G. Luizet among the H.P.'s. A silver medal was awarded. Similar awards were given to Mr. G. Mount, Canterbury, for Roses Maréchal Niel, Niphetos, and Catherine Mermet in quantity; to Mr. Walker, Thame, Oxon, for Roses Maréchal Niel and Niphetos, and to Mr. W. Rumsey for Niphetos and other varieties. A small group of Roses in pots and Azaleas came from Mr. Perry, gardener to Mr. J. C. Tasker, Middleton Hall, Brentwood. Messrs. Barr contributed a large group of cut Daffodils with *Anemone fulgens* and *Muscari*. The best kinds are referred to in our report of the R.H.S. meeting. A bronze medal was awarded. A similar award was given to Mr. Ware for a large group of Daffodils, Spanish Irises, *Gladiolus The Bride*, *Ranunculi* and *Freesias*. An interesting group came from Messrs. Williams, of Holloway, including *Amaryllis* in fine variety, *Leschenaultia biloba major*, *Cypripedium Schrodereri*, and *C. Rotsebildianum* very fine, *Dendrobium Wardianum giganteum*, a good form with broad petals. A silver medal was awarded. Messrs. Paul and Son sent a collection of Cannas, and eight fine specimen plants of *Mignonette* were sent by Mr. W. Barrell. Mr. W. Meads, gardener to Mr. Henderson, Buscot Park, Faringdon, received an award of merit for Melon Countess, the fruits very good for so early in the season.

A full prize list will be found in our advertisement columns.

**The Royal Gardeners' Orphan Fund.**—The usual monthly meeting of the committee took place at the Horticultural Club on the 26th ult., Mr. William Marshall in the chair. A special donation of three guineas was announced from Mr. J. Kipling, The Gardens, Knebworth, Stevenage, received as fees for skating on the lake during the winter. Mr. N. Sherwood has generously agreed to place a child seven years of age upon the fund, to be known as "The Emma Sherwood Presentation." In sending him a special vote of thanks, the secretary was instructed to request Mr. Sherwood to nominate a

child. Mr. Harrison, of Leicester, who took the chair at the annual meeting of the subscribers to the fund, was nominated a vice-president, and a special vote of thanks to him was passed. The secretary laid upon the table the accounts of the annual dinner, and it was stated that a very satisfactory financial result had accrued. Special votes of thanks were passed to Mr. H. J. Veitch for presiding at the annual dinner and to the donors of plants and flowers. Mr. Barron reported that what remained of the fruit and flowers at the close of the dinner was sent to the Hospital for Sick Children in Great Ormond Street, and a letter was read from the lady superintendent gratefully acknowledging the same.

#### DAFFODIL SHOW AT BIRMINGHAM.

APRIL 24 AND 25.

THE Narcissus show at the Birmingham Botanic Gardens on April 24 and 25 far surpassed the two annual exhibitions previously held there both in extent and variety as well as in the extra fine quality of the flowers shown. The large collections from Messrs. Barr and Son, Messrs. Jas. Veitch and Sons, Mr. T. S. Ware, and Mr. Sydenham were in perfect condition and much admired, silver medals being in each case awarded to them. Messrs. Pearson and Sons, of Chilwell, Notts, and Rev. S. E. Bourne, of Lincoln, also had very extensive groups of flowers exquisitely fresh and highly coloured. New seedlings were shown by Rev. G. H. Engleheart, Messrs. De Graaf, of Leyden, and Messrs. Jas. Veitch and Sons, and the first named exhibitor and raiser staged the finest new seedling in the show, a bold and shapely Ajax named Ellen Willmott, having creamy white perianth and a broadly expanded yellow crown. It is in the way of Weardale Perfection, but larger, with a deeper tinted chalice or corona. Mr. Engleheart also had a seedling in the way of Lulworth, but having a more expanded cup of not quite so vivid an orange red colour. The pure white hybrid between *N. triandrus* and *Ajax albicans* was also exhibited, and, like the last, gained a certificate of merit. It is a dainty thing, not inaptly described as a white form of *N. Johnstoni*. The show was well organised and tastefully arranged, but, unfortunately, rain fell on both days, thus preventing many visitors from enjoying perhaps the finest Daffodil show seen since the first Narcissus conference in 1884. Messrs. De Graaf showed a number of seedlings, including F. W. Moore, a noble yellow Ajax in the way of G. G. of Leyden. They also showed fine blooms of Mme. Plump and of a dainty white Ajax named Cecilia, having a green stripe at the back of each of its perianth segments. Some of the visitors to this show were much interested in the new rock or alpine garden now in course of formation in the Birmingham Botanic Gardens by Messrs. Backhouse and Sons, of York. It is a bold combination of rocky peaks and plateaux above a rock pool having boggy margins. A new annex, terminated by a stage for the orchestra, has also been made to the exhibition corridor. Altogether there are signs of well-directed progress and energy in the management of the gardens and exhibitions. F. W. B.

**Effects of the winter at Penzance.**—The effects of the past severe winter, and especially of the biting wind experienced in exposed situations, are particularly noticeable on the sea-front at Penzance. Nearly all the lodging houses had their strips of front garden separated from each other by hedges of *Veronica*; these are now absolutely killed. In one or two cases where *Euonymus* took the place of *Veronica* the shrubs are so damaged that they will have to be cut back almost to the ground level. In the public gardens the large Aloes have been badly damaged, and the Bamboos injured by the wind. Inland, among the Elm trees appearances are not so pitiful, but not a tithe of the Wallflower plantations that were



to be found on all sides at this time last year are to be seen now. In a sheltered spot in the neighbourhood I saw the other day a splendid specimen of *Pyrus japonica* in full flower. The branches covered the whole front of a cottage, and the vivid scarlet of the blossoms against the grey Cornish granite with a setting of blue sky overhead formed a picture not soon to be forgotten.—S. W. F., *Penance*.

### EPHING FOREST.

As one of the so-called "experts" who, at the request of the Epping Forest committee, studied on the spot the question at issue about Epping Forest, kindly let me urge through the *Times* that the report itself should be considered. The trouble arose from the Epping committee having the very common, but erroneous idea that Oak and other forest trees are best isolated—i.e., what they call specimens—and not having the faintest idea of the natural character of a forest, in which the trees are generally tall and massed, the effect being quite different from that of trees in open parks and pleasure grounds. With all his good-will for the Forest and sense of its natural beauty, it was difficult to get even Mr. Buxton to see this, and yet it is evident in all true forest and even in the beautiful Oak woodlands of Sussex. Kindly let me quote the essential parts of the report as regards thinning—and the whole question of Epping Forest arose over the thinning of closely massed trees:—

**POLLARD HORNBEAMS.**—A vast proportion of the area of the Forest is covered by pollard Hornbeams. In parts they are an interesting feature, but the practice of pollarding having been discontinued, the trees are now so dense that neither light nor air can penetrate. We consider that, with a view to encouraging the growth of better trees and varying the monotony of the Forest, the best course will be, not generally to thin the trees, but to make bold clearances among them. The finer pollard Oaks throughout the Forest should be carefully preserved.

**UNDERWOOD.**—Although in many places this forms one of the beauties of the Forest, we do not think that in all parts sacrifices should be made for the purpose of encouraging it where the trees do not allow of its healthy growth, as under Beeches. The effect of closely-massed forest trees constitutes a beauty in itself. In approaching the question of thinning, we think we can best point out our views by taking as examples a few typical parts of the Forest, as it is impossible to lay down any general principle for dealing with so vast and various an area.

**HAWK WOOD** is, in the main, an Oak wood, and the trees are not such as would be improved by wholesale thinning. It would be, in our opinion, wise to take out no trees, except such as are obviously dying, and a few scrubby stunted trees which are injuring the others. Where, here and there, a single specimen of more than usual beauty can be encouraged into noble growth, it should be protected from overcrowding. But we attach great importance to preserving the massive character of the Forest, especially in this wood.

**MOXK WOOD.**—This consists of fine old pollarded Beeches, and, in our judgment, it needs no further thinning for many years to come.

**HIGH BEECH.**—The trees here are of considerable age and beauty, and we do not think that they should be interfered with.

**WALTHAMSTOW WOOD.**—The beautiful undergrowth of Holly is here a distinctive feature. There are a few dead and dying trees which

should be removed, and here and there some pollards, which threaten to injure the Hollies. The healthy Oaks, even where crowded, should be left standing. The beauty of tall Oak stems, often Lichen-covered when growing in close woods, should be considered.

**THEYDON HIGH WOOD.**—Here are Beech trees of moderate age which have not been pollarded, forming a dense canopy of leafage, and constituting a distinct feature. We recommend moderate and periodic thinning.

**LORD'S BUSHES.**—At this point there is a struggle between healthy young trees (Oaks and Beeches) and a number of old pollards, some of which are dying. Having regard to the preponderance of pollards in the Forest, we should, as a rule, let the young trees take the lead, preserving the finer and more picturesque pollards.

These directions, which can be so easily followed, as regards the future of the Forest might well be left to the very competent superintendent of the Forest to carry out, and any bringing in of outsiders or strangers to mark the trees is perfectly needless in the face of such simple directions, consisting for the most part in letting the beautiful Forest retain its natural varied and picturesque character.

SYLVA.

### NOTES OF THE WEEK.

**Tulipa saxatilis.**—Among many Tulips, species and varieties, flowering in Messrs. Barr's nursery at Long Ditton, this one is most attractive by reason of its singular and pretty colour. The flower is of a clear, pale mauve or lilac colour with a rich yellow base internally.

**Magnolia stellata** (M. Halleana) is very beautiful just now in the Royal Gardens, Kew, where we noticed a small bed of it on the grass. Such a position as this suits this Magnolia. Every shoot is covered with white flowers with rather narrow segments and strongly fragrant.

**The Lady Tulip** (*Tulipa Clusiana*).—Several clumps of this on a sunny border at Kew were worth a note the other day. This species likes a warm spot and light soil. The flowers are slender and graceful, white, with a flush of dull carmine on the surface of the outer segments.

**Cattleya Schroederæ.**—I have sent you to-day two blooms of *Cattleya Schroederæ*. I think you will agree with me that it is a very good variety: it opened perfectly white (five weeks since), but since a slight trace of lavender is perceptible.—T. R. CUCKNEY.

\* \* \* A remarkably fine form.—Ed.

**A group of the Snake's head** (*Fritillaria Meleagris*) is in full bloom at Kew. The leaves and bold flowers form quite a spring picture, the flowers varying in colour, but the almost white form is the most pleasing. It stands out better than the curiously chequered purple-coloured kinds.

**Daffodils at Kew.**—These are now in full beauty in the Royal Gardens, Kew. There are several large beds of the leading kinds, bold masses of the several forms being kept distinct. None, however, are so fine as Emperor, the flowers being remarkably large and the leaves very robust.

**Rhododendron Jacksoni.**—This early flowering hybrid kind merits notice not only for its earliness, but also for its bright effect and freedom of flowering even upon small plants. The buds are rich crimson, but expand into flowers of a light rosy pink colour with spots of a darker hue and a distinct band of deep rose down the centre of each petal.

**Strawberry Royal Sovereign.**—Another season has again proved the excellence of this

variety for forcing and its splendid travelling qualities, and though last year was not a very favourable one for pot plants forming good crowns, the plants of Royal Sovereign have this spring borne large clusters of firm and good fruit.—W. G. C.

**Wood Lily and Windflower.**—One of the most charming flower pictures in the garden this week is *Trillium grandiflorum* and *Anemone Robinsoniana*, both in bold groups clustering together and hiding the ground with a dense carpet of pretty leaves and lovely flowers. The *Trillium* is quite happy in a bed partially shaded by Azaleas and growing in a stiff, moist loam.

**Tulipa orphanidea.**—This is another distinct and beautiful Tulip, of which Mr. Barr has a good group in flower at Long Ditton. It is free blooming, the flower of a bronzy yellow colour mottled with brown, and with a conspicuous zone of brown at the base of the flower, which is about as large as that of *T. sylvestris*, but with broader pointed petals.

**Erythronium Hartwegi** is an uncommon, but pretty Dog's-tooth Violet not very easily managed. It has a very long flowering season, strong bulbs sending up several blooms in well come succession. They are of a pale yellow colour, with a zone of a richer and brighter yellow at the base, the leaves beautifully mottled with dark purple on a light green ground.

**Camellias in the open air at Windsor.**—Mr. F. T. Barry sends us from his garden at St. Leonards Hill, Windsor, a box of *Camellia* blooms cut from plants that have been growing in their present position for the past seven years. The plants have had no protection whatever. The flowers are large, richly coloured, the foliage also being very healthy and bright.

**The Chinese Plum** (*Prunus triloba*) is now a mass of bloom on a sunny wall at Kew. Why is not such a lovely thing as this more often seen? The branches are covered with double rosette-shaped flowers of delicate rose, varying in colour somewhat, but only more charming for this variety of shade. A coloured plate was given of it in THE GARDEN, October 3, 1885.

**Primula rosea and Marsh Marigolds.**—A mass of this Himalayan Primrose and the double forms of *Caltha palustris* is very beautiful at Kew. Both delight in a wet, boggy soil. The Primulas are a mass of bloom, and one notices when so many are grouped together the difference there is in the shade, as well as size of the individual flowers, some being deeper in colour and larger than others.

**Fritillaria pallidiflora.**—This tall and handsome species is flowering well at Long Ditton. It is distinct and striking both in leaf and flower. It grows to a height of about 18 inches, the strong stem freely clothed with large glaucous leaves its entire length and terminated by two fine flowers nearly as large as those of the Crown Imperial, and of a pale self yellow colour with a few slight markings inside.

**Menziesia empetrifolia.**—Following in close succession to *Erica carnea* comes this pretty plant. It is allied to the Heaths, and valuable for the rock garden or when grouped near the edges of beds and borders. It has come unharmed through the past winter, and its tufts are now quite hidden by the rich profusion of its flowers, which are large individually, borne in thick clusters, and of a bright rosy-red colour.

**Anemone blanda.**—This shows a much greater tendency to vary in colour than its deeper tinted relative from the Apennines. Two lovely forms that Mr. Barr now has in flower at Long Ditton are *A. blanda taurica*, which has large flowers in pale blue shades of varying depth, and *A. blanda scynthica*, by some called *Anemone blanda bicolor*, the flowers of which are blue on the outside, the inside being pure white.

**Primroses from Winchmore Hill.**—Mr. Perry sends us from his nursery at Winchmore Hill, N., some fine flowers of the double crimson

Primrose, which we should like to see more often in gardens. He also sends us the old blue Polyanthus, the colour of which is very poor and ineffective. We lately saw some fine masses of the old double white Primrose growing and flowering freely along with Trillium and Anemone Robinsoniana.

**The double Jew's Mallow.**—Whilst traces of the past winter are all too apparent in most gardens, one turns with pleasure to those things that burst into bloom as though no unusual cold had been experienced. Among such the double Jew's Mallow is bright and welcome, especially as at Dropmore, where it makes a fine picture at the present time on a wall and allowed to grow in its own way instead of being needlessly restricted and thinly trained.

**Tulipa Greigi.**—The effect of this fine Tulip is gorgeous, and doubtless it will be grown by many when it becomes plentiful and cheap. It is in fine form this week. A dwarf and sturdy kind, its flowers are of great size compared with its stature, and stand up boldly on very strong stems. The flowers are usually of a brilliant scarlet colour, but vary in a welcome way, some being orange red in colour. Its leaves are pretty, too, having numbers of dark brown marks upon them.

**Garden walks.**—The present time is a good one for cutting Box edgings and for rectifying blanks where such have occurred. Where exhausted, the old stock should be replaced by young healthy plants, planting carefully and firming well; this last point is of great importance in this work, as Box does not take well to a loose root-run, especially if a dry time follows the planting. Some weed destroyer should now be applied to kitchen garden walks and the roller run over after the first rain.—J. C.

**Fritillaries in the Grass.**—These are never seen to better advantage than when growing in the Grass, and a large group planted under such conditions is quite one of the features of the present week. The flowers embrace many intermediate shades of colour, from that of the dark-hued typical form to pure white. In many cases three large flowers are borne on each stem. Those referred to belong to what the Dutch growers call the grandiflora strain, and merit that distinction, as the flowers are altogether finer than those of the common wild type.

**Daffodil Queen of Spain in the Grass.**—This graceful and distinct new Daffodil being happily obtainable in quantity, we have already been able to try it in the Grass, and now in its second season it gives every indication of future success, and promises to be one of the best for growing in this way. It is a great acquisition, being so unlike any other kind at present grown, therefore readily distinguished and easily remembered. Its clear yellow colour comes out well in a setting of rich green Grass, and the flowers gain in size as the bulbs become established.

**Ceologyne Dayana.**—I am sending you an inflorescence of *Ceologyne Dayana* for your inspection. It carries thirty-nine flowers and measures 3 feet 3 inches in length. I would be glad to know whether it is usual for this lovely Orchid to produce such long racemes. The plant from which this was taken has two other racemes, one measuring 38 inches, with forty flowers; the third is not yet developed, but promises to be equal to, if not longer than either of those mentioned above. The plant is in vigorous health, the bulbs being very stout.—J. ELLICOTT, *Summerville Gardens, Limerick.*

**Trilliums.**—Several pretty species are now flowering in Mr. Barr's nursery at Long Ditton. *T. grandiflorum*, with its large pure white flowers, is the finest of them all. *T. atro-purpureum* is pretty, with its distinct reddish brown flowers. Both of these have plain green leaves, but two others have their leaves beautifully mottled with dark brown, namely, *T. sessile californicum*, which has a large flower with long white petals, stained with purple at the base, and *T. recurvatum* with flowers of a dark red-brown

colour. *T. erectum* is a lovely kind with large leaves and a white flower. It rather belies its name by a decided drooping habit.

**Sax fraga luteo-vididis** (Schott. and Kot.).—This, the true variety of *S. luteo-vididis*, is now blooming at Exeter (Veitch's nursery), and is a very attractive plant. It must not be confounded with that early-flowering primrose coloured variety often called *S. luteo-vididis*, *alias S. luteo-purpurea*, *alias S. Frederici Augusti*, which, according to Mr. Wolley-D. D., is altogether wrongly named, and should be called *S. apiculata*, which name was given to it by Professor Engler. The true *S. luteo-vididis* (Schott. and Kot.) is so distinct that there is no possibility of mistaking it for the other variety. When not in bloom the plant resembles *Saxifraga calyciflora*, its rosettes of encrusted pointed leaves being arranged very similarly. The flower-stem, produced from the centre of the rosette, is 3 inches long, erect, and bears at the top a cluster of cup-shaped flowers. The corolla, of a deep golden yellow, is surrounded by a hirsute calyx of a pale yellowish green. The contrast between the colours of the calyx and the corolla is most distinct, and the appellation "luteo-vididis" seems most appropriate.—F. W. MEYER.

**Notes from Almondsbury.**—My experience with *Iris stylosa* this winter is a sad one. Large clumps under a west wall are quite dead. Here and there a few new shoots are appearing. These clumps have been here seven years, and I have never even known them to be injured before. *Iris Milesi*, supposed by many to be tender, under the same wall is quite unhurt and promises the same vigorous growth and bloom as last year. *Eremurus robustus* is very strong and good, yet I once lost this in a March snow and frost. A bed quite unprotected full of two-year old seedlings of *Gladiolus Narceianus* promises well. I have grown these *Gladioli* for some four years, and find them vigorous and satisfactory beyond all others. It seems as if all *Iris*es of Asiatic origin like *Iris Milesi* were far better suited to our climate than the African *Iris*es like *stylosa*. Nothing is more useful here than the *Polyanthus Primrose*. My original lot of twenty or so came to me from Miss Jekyll, and I have now hundreds of plants in all stages by saving seed from one specially fine plant. I hope to improve even on what I now have. These look most lovely in the Grass at the foot of Plum trees. A very pretty combination of colour just now is an irregular line of alpine *Auricular*ae, some tall apple-pink *Lent Roses* (*Hellebores*) and at their feet quantities of *Anemone Robinsoniana*. Judging by my *Daffodils*, slugs are not at all sufferers from the cold. Sir Watkin has with me been unusually fine, but the other sorts poorer than usual.—C. O. MILES.

## PUBLIC GARDENS.

**Gift of a park to Liverpool.**—At a meeting of the Liverpool city council a letter was read from the local solicitor, stating that he had been instructed to offer to the city a plot of land covering 108 acres, which had been laid out as a recreation ground. He was not at liberty to mention the name of the donor. There were some buildings on the land, the rents from which would nearly pay for the maintenance, leaving only a small charge on the city. It was decided to accept the gift.

**The Bute House estate.**—A meeting of the inhabitants of Petersham, the vicar, the Rev. W. H. Oxley, presiding, was held last week to consider the proposed conversion by Sir J. Whittaker Ellis of the Bute House grounds into a building estate. The following resolution was adopted: "That in the opinion of this meeting of the inhabitants of Petersham it is desirable that a most determined effort should be made to induce the Crown authorities to follow the precedent of 1883—viz., to purchase the Bute House estate, Petersham, for the use of the people,

and to add it to Petersham Park, and thus preserve for ever to the public as an open space the beautiful grounds which now form so prominent a feature in the foreground view from the pet Thompson's walk." A deputation representing the inhabitants of Petersham was appointed to wait on the Crown authorities, and it was also resolved to ask the assistance of the Corporation of Richmond.

**Open spaces.**—At the monthly meeting of the Metropolitan Public Gardens Association, 83, Lancaster Gate, W., it was agreed to open to the public towards the end of May the disused burial-grounds of St. Peter's, Walworth, and St. Mary's, Woolwich, lately laid out by the association. It was announced that seats had been placed on the Main Drainage Embankment, E., and by the river at Chiswick, W. It was decided to grant additional seats for Hackney Churchyard, and to offer some for Hammersmith Churchyard, St. Peter's Churchyard, Cornhill, and a garden in Stockwell Road. Attention was drawn to cases of building operations on disused burial-grounds in apparent contravention of the Disused Burial Grounds Act, 1884, and it was decided to take steps to ensure a full inquiry into each case, in order to secure a due observance of the law. The completion of the tree-planting in Whitechapel Road and the laying out of Allhallows Churchyard, London Wall, was announced, and it was agreed to endeavour to obtain as public open spaces a vacant site in Mile End Road, the Brixton Oval, the Copperas, Bromley, E., Walcot and St. Mary's Squares, S.E., a plot of land in Hornsey, an enclosure in Upper Street, Islington, and one of the Jewish disused burial-grounds. Letters were read respecting a site to be laid out by the association in Canning Town and vacant sites in Deptford and Walworth. It was decided to prepare plans for the laying-out of Bromley Churchyard, E., and St. Stephen's School ground, Bow, E., and a correspondence was read between the Earl of Meath and Lord George Hamilton, the chairman of the London School Board, on the subject of extending the teaching of physical training and swimming in board schools.

**Cobbett's Gardening.**—The first and, so far as I know, the only edition of "The English Gardener," by William Cobbett, was published by the author in 1829. It is a duodecimo, and is divided into seven chapters, each of which is subdivided into paragraphs, of which there are 551. The book is without pagination. It possesses a merit which many books on gardening singularly lack—it is well and interestingly written. Cobbett was also the author of "The American Gardener," published in London in 1821.—W. ROBERTS.

**The weather in West Herts.**—April was a warm spring month, the shade temperature on twelve days rising above 60°, while the exposed thermometer at no time registered more than 8° of frost. At 2 feet deep the temperature of the ground rose during the month from 43° to 51°, and at 1 foot deep from 43° to 53°. It is at the present time warmer than is usual at the beginning of May. Rain fell on fourteen days to the total depth of about 1½ inches, which is rather less than the April mean. The sun shone on an average for four and a half hours a day, or for a shorter period than in any April since 1891.—E. M., *Berkhamsstead.*

**What's a fruit?**—At our local flower show we have a class for wild fruits, and there are often disputes as to what constitutes a fruit. I should therefore be extremely obliged if any of your correspondents would kindly give me a good definition of a fruit.—J. HENSHAW.

**Names of plants.**—*Thomas Tyler.*—*Narcissus* Queen of Spain.—*J. R. Allan.*—*Rhododendron davuricum* var.—*T. Down.*—1, *Rhododendron Nuttallii*; 2, *Epidendrum cochlearatum*; 3, *Bletia Serraniana*.—*W. Wright.*—1, *Cypripedium Lawrenceanum*; 2, *Aloe gasteroides*; 3, *Pteris longifolia*; 4, *Pteris aquilina*.—*J. Anderson.*—*Lissochilus Krebii.*—*Constant Reader.*—Harrison's Musk. Yes, it will answer as you suggest.

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"This is an Art  
Which does mend Nature: change it rather; but  
THE ART ITSELF IS NATURE."—*Shakespeare.*

## CHRYSANTHEMUMS.

### RAISING SEEDLINGS.

As has been amply proved in the past, the raising of seedling Chrysanthemums is very much of a lottery. Still, when one single sterling novelty like Duchess of York, for instance, can be had from seed, it affords encouragement for still further trial. Of course, if seed is sown, a very large percentage of worthless varieties must be expected. But to obtain such a fine form of the Japanese section from a selection of twenty-five plants was indeed a wonderful piece of good luck. Such returns are encouraging. It seems almost useless to attempt seedling raising of other sections; incurved varieties are in nine cases out of ten poor examples. Much might be done to encourage the raising of Chrysanthemums by offering prizes for home-raised seedlings. The conditions as to time should be unlimited, though it is not possible to treat seedlings like ordinary annuals. Two years really are required before the plants can be tested properly. There is a tendency amongst seedlings to show large eyes the first season, these in many instances being condemned as worthless. If a second year's trial of these were carried out, a greater percentage of desirable blooms would, no doubt, be obtained. Generally raisers of seedlings are so anxious to see the results, that the plants are run up with one single stem and allowed to bloom. Even well-known good kinds exhibit a marked difference both in colour and formation when allowed to develop blooms from the side shoots also. So much does this affect some varieties as to make them hardly recognisable; therefore, in the case of undeveloped seedlings we may expect similar results. The growing of seedlings occupies much space and time. A good plan is to plant them out of doors in some sunny, open situation and allow all that will to flower in the open, even if protection from early frost in a temporary manner is necessary. An idea can be formed of those likely to be worth a further trial, and much valuable space will be saved. Where, of course, space under glass exists for blooming the plants even the first year, I recommend strongly that there they be flowered. Pots 7 inches in diameter are large enough for the first year's growth. No check should occur to the plants in the way of allowing them to become root-bound in their initiatory stages. The one desirable point about seedling Chrysanthemums is that the height of growth and general habit can be controlled by carefully selecting suitable types of growth as the seed-bearing parents. Not so with sports. In all instances the habit of growth partakes of that from which the sport originated, no matter whether it is desirable or not. No form or method of culture can alter this.

Now that work presses heavily in all parts of the garden there is a possibility of the plants that are grown for a variety of purposes being somewhat neglected, except under the most rigid management. One of the most important items in culture at this stage is to keep the plants growing freely by transferring them to larger pots as they require more space for their roots, putting those plants for the production

of large blooms into pots 5½ inches in diameter. For specimens an inch more is not too much at this stage, and those for bushes and late flowers should have 5-inch pots. Pompon, Anemone pompon, and single varieties succeed in 7-inch and 8-inch pots for the final shift. If they go now into 4½-inch pots, at the next shift they may go into those in which they are to flower. In all cases employ a substantial compost, avoiding much manure, although sufficient for the production of vigorous growth must be given. Pot firmly, as if the soil is placed around the roots in a loose way the growth made is not firm.

It is useless to expect blooms of that deep, solid character so pleasing to all connoisseurs of the flower without ripened wood. It is also useless to attempt to ripen or mature it in a couple of months previous to the flowering of the plants. Maturation must proceed along with growth. All newly-potted plants should be kept a trifle closer in the frames for a few days until the roots are running into the new soil, when all the air possible should be given. Plants growing in frames or pits should be fully exposed to induce a stocky growth; in fact, the lights ought to be drawn off them altogether upon all favourable occasions. It is too early to expose them entirely by night without some protection. Plants crippled at the points by exposure receive such a check to growth that they seldom recover. Abundance of space should also be allowed between the plants.

E. MOLYNEUX.

### NOTES ON RECENTLY INTRODUCED VARIETIES.

In supplementing my former remarks upon the newer kinds I would first refer to the incurved sorts. Really good additions to this class are somewhat slow to appear. The attention of raisers is apparently concentrated upon the more showy Japanese, and it is only by chance an incurved Chrysanthemum of sterling merit is added. Thus

J. AGATE was sold as a Japanese variety, and on a second trial has developed into a magnificent ball-shaped flower. It is large, high-centred, and full. The petals are of fine waxy substance and the bloom well finished. Colour pure white. It has an excellent habit, of medium height. The flower-buds one should select for specimen blooms are those that come early.

GLOBE D'OR.—Buff, shaded yellow. This is a flower of medium size, but deep, full, and nicely incurved. The plant is of fairly dwarf habit with good foliage. Do not over-pot this sort. Like most of the type, a 9-inch size of pot is large enough. Choose buds of early formation.

LORD ROSEBERRY.—This variety has scarcely fulfilled the expectations formed of it. Although pretty largely grown, it was conspicuously absent in the flowering season. Another year may bring an improvement, for when the sort was first seen it was an excellent type of the true incurved Chrysanthemum. The colour is a dark shade of rose-purple. It is of good size, well formed, and the plant is not difficult to grow, but the formation of desirable blooms is very uncertain.

MRS. J. GARDINER.—I feel sure we have not seen this variety at its best yet. It was freely cultivated last year, but the season may not have suited it, and I would advise that particular attention be bestowed upon the variety this year. The colour is yellow with a buff shade. It is full, deep, and especially lasting. The blossom is well incurved to the centre, and has a distinct appearance. It has a good healthy growth and is dwarf. The bud selected should be early, and the sort likes generous culture in the matter of stimulants.

ROBERT PETHFIELD.—This has a splendid flower of the true incurved type, but it is a weakly grower. The colour of the bloom is a soft shade of pink, bright and pleasing. Its flowers are large, full, and deep. An extra amount of ehareol may be mixed with the compost for this variety and care be exercised in watering. Buds selected in early September may be relied upon to perfect a good specimen.

C. B. WHITNALL.—Varieties of the class under notice are so rare from America, that this sort is particularly welcome. It produces extra large, deep, well-shaped blooms. The colour is purple, but as the incurved flower exhibits the outer portion of the petals we get a lighter shade. The plant is a strong, dwarf grower and it should have a pot of the large size in common use. Start with good stout plants in the early season and then select late formed buds.

DESCARTES.—This variety and the four that follow belong to the Anemone-flowered section, a very pretty class. The sorts at present are somewhat dull as regards colour—I mean we desire others with red and crimson shades to give more life to them. This done, there is no reason why their cultivation should not be considerably extended. They are easily grown and particularly free flowering, and when grown without being disbudded form excellent bunches of bloom for cutting. The sort above named is a deep crimson-red and a very telling colour. The flowers are of good size, with a well formed centre or cushion, and the plant grows well. There can be no mistake about the selection of buds in the case of the Anemone-flowered if late-formed ones be always chosen.

JUNON.—Silvery blush colour. The most remarkable point in this sort is its well-developed cushion. In this respect the sort is unequalled in depth and form. It is not a strong growing kind, but still a good doer, and one that will be used freely for show, and for cut flowers.

JOHN BENYAN is now pretty well known as an excellent yellow variety, uncommonly free, and of easy culture.

QUEEN ELIZABETH—This variety was introduced at the same time as the last-named, but somehow it is not so well known. I regard it as among the very best exhibition Anemone sorts. Its centre is large and well formed, the guard florets being long and of pretty formation. The colour of the bloom is blush-rose, with just a tinge of yellow in the centre. It has a capital habit of growth.

W. W. ASTOR.—Another most excellent kind, of a light blush-pink shade. The centre is high and showy. It is dwarf and very easily grown. Give this sort a large pot, as it wants much moisture at the roots.

There has been nothing of special note raised for the past year or two among the small types of Chrysanthemums—the pompoms, Anemone pompoms, and so on. Several good single-flowered sorts have been added, the most charming being

PURITY.—This has a most striking and beautiful white blossom. Its green-tinted centre adds to its effect. When grown as a large bush plant and every bud allowed to develop a flower, such a variety as this is invaluable for cutting.

MRS. D. B. CRANE.—This is not new, but it is such a charming single that I have included it in these notes. Crise-pink of a light tint describes its shade of colour, and in every other respect it is an excellent variety, one that should be seen everywhere. H. S.

New American Chrysanthemums.—Novelties from America this spring will number less than a hundred varieties. The principal raisers who are sending out seedlings are Messrs. Spaulding, Homer, Graham, Pitcher and Manda, Vaughan, J. N. May, Hill and Son, Smith and Son. A consignment of Japanese and Californian seedlings is among the number. Mr. Hugh Graham, who raised Philadelphia, the large massive incurved Japanese which was exhibited at the Aquarium

show in November, and to which the silver-gilt medal of the N.C.S. was awarded, is distributing several other novelties, viz., Mrs. Wm. H. Hurley, Mrs. Thos. E. Wiedersheim, and Katherine Leech. C. H. P.

**M. E. Calvat's new Chrysanthemums.**—At the floral committee meetings of the N.C.S. last season M. Ernest Calvat was a prominent exhibitor, and several of his new varieties were awarded first-class certificates. They were *Amiral Avellan*, a large yellow Japanese; *C. Harman-Payne*, a Japanese of a dark purple shade, spotted white; *Directeur Tisserand*, also of the same section, but of an ochre-yellow shaded crimson; *Mr. R. Ballantine*, a carnation-like Japanese with silvery reverse; and *Reine d'Angleterre*, also a Japanese, of a deep mauve and silvery reverse. In each case the raiser asks the unusually high price of 2s. for a plant. M. Calvat's success in this country seems to have induced many of his countrymen to take up the cultivation of seedlings, and there are at least seventeen French raisers announcing the distribution of new Chrysanthemums this spring. Altogether the total number of novelties from the Continent amounts to 345 supposed new sorts. Some of them are hairy varieties, some early, a few late, but by far the greater number are of the ordinary large-flowering Japanese varieties.—CHRYSANTH.

#### CHRYSANTHEMUM NOTES.

**STOPPING THE PLANTS.**—Last year about this time I wrote in THE GARDEN somewhat in favour of a system of pinching the tops out of the plants to hasten or delay (as the case might be) the production of a bloom bud at or about a given time. The plan referred to the growth of the plants for large specimen blooms. After another year's practice, however, I am not at all disposed to recommend the plan generally, for at the best it is misleading. Were all seasons alike, one might furnish data that would be of some assistance to others, but how could such close rules as stopping a shoot on a certain date in 1893 apply to a similar date in 1894? Who can tell which of these two vastly different seasons the present one is likely to follow? I believe, therefore, that by far the better system of culture for large blooms is the one which has now been in vogue for many years past. This mode is to strike a cutting if possible without a little flower-bud at its tip, allow it to take its natural course upwards, and train the single stem to a stick until a natural stoppage takes place. This is caused by the formation of a flower-bud, which is, as a rule, useless for the purpose of blooming, such bud developing into an ill-formed mass of florets. The time a natural stoppage takes place varies according to the variety, from May to June being most usual. Now, the object of topping a plant is to delay the formation of a natural break in an early flowering sort, so that a further stoppage may be timed to a particular date; and also to cause a break in the case of very late sorts, which in a natural way may not be obtained early enough in the season to allow the plant time to perfect the growth of three other shoots and the same number of blooms in time for the November shows. For the latter purpose the system of stopping is commendable, and as the varieties which may be so operated upon are few in number, I will name them: Mrs. Falconer Jameson, Mrs. E. W. Clarke, The Queen, W. G. Newitt and the difficult Mrs. Alpheus Hardy. Curiously, the sorts named are of American origin. I am a little doubtful about Mrs. F. Jameson, but believe that was its first source, although distributed in England. Persons who pay attention to the origin of varieties will have noticed the natural lateness of American-raised ones;

a few early kinds such as Wm. Tricker and Mrs. E. G. Hill only serve to prove the rule. This fact should be borne in mind in regard to matters of growth. For easy culture there are no Chrysanthemums to equal the French-raised sorts. Take *Viviani Morel*, *Mme. Lacroix*, *Mme. Thérèse Rey* among a host of others. In this respect our English seedlings are in the rear, sorts like *Robert Owen* and *Viscountess Hambleton* being anything but certain.

With regard to topping, I may say the late kinds named should be operated upon quite early in May, even in the south. My views upon stopping were considerably modified last season in watching the results of a collection that had been well managed. Up to the month of June no plants could have looked better or grown stronger. They were mostly incurred sorts and had made their breaks in due course. Now after the shoots caused by this break had grown 6 inches long, the tip of each was taken out for the purpose of timing the appearance of crown buds by early September. Consequently the waste of valuable time in a sunless season by the formation of new shoots was so considerable, that the period left was not long enough to properly develop the new growth, and instead of having the flower-buds at the desired date they were late and produced blooms of an inferior character. But a few plants left to their natural growth furnished remarkably fine deep specimen blooms. In that case then, had topping been unknown, the cultivator would have succeeded in his particular object—namely, magnificent flowers of the exhibition type. As an old exhibitor I have practised more than one mode in the growth of sorts, because it is wise in close competition to give all one's resources a trial. I have often succeeded in one way with a variety of peculiar habits when orthodox systems have failed me. I would, however, warn would-be exhibitors with thoughts of topping choice plants to take everything into consideration before touching the same, the position of the garden, whether favouring quick or slow growth; the state of individual plants, whether more forward or backward than the general batch. Only by carefully weighing such items as these can one be in a position to cope with the perfection, from a florist's standard, that the Chrysanthemum is brought to to-day.

Another matter that causes beginners some doubt is the size of pots best for the final stages. I would use two sizes, one for the incurred class and another for the Japanese kinds. In the former case select those of 9-inch diameter and for the latter not less than 10 inches across. Incurred Chrysanthemums may easily be overgrown, but the Japanese sorts are seldom too strong provided the growth becomes well matured. The advantage of pots of good size is that we may stand the plants well apart, say 2 feet, in their summer quarters without much danger of loss of roots through drought. Of course, watering must not be neglected, but the larger the pots the less often are supplies needed. Mr. W. H. Lees (whose magnificent blooms are admired by all and envied by not a few exhibitors) depends principally upon pots larger than I had seen used in many cases, whilst Mr. E. Beckett, another grower of marvellous blooms, employs sizes not larger than the 9-inch. The latter, however, does not give his plants so much room as does Mr. Lees. But what I wish to point out is the fact that here are two growers equally successful with the flower, but who differ on a point that one might consider of great importance. I would advise the use of comparatively small pots for very strong growing sorts for the purpose of restrain-

ing their tendency to produce coarse blossoms. In this category are *M. R. Bahuant*, *Lord Wolseley*, and *Prince Alfred* among incurred varieties, and *Etoile de Lyon*, *Mrs. C. Harman-Payne*, *Duke of York*, and *Mrs. E. W. Clarke* among the Japanese. The above will be found a very good means of bringing out what little refinement such sorts possess.

The style of growth and high feeding with stimulants necessary for the production of show blooms, as a rule, tend to exhaust the powers of the plants for the production of healthy cuttings after the flowering period is over. This then is an item of culture we should see to at the present time of the year. It generally happens that more plants are propagated than are needed to grow throughout the summer for large blooms. These remnants are valuable for future use. Plant them out on any spare piece of ground, and by occasionally stirring the surface soil, as well as freeing it of weeds, little else will be needed until autumn, when the plants may be either taken up and potted or protected outside, and the desired number of healthy cuttings obtained. There is plenty of time, again, to root little cuttings now for the same purpose, and even the side shoots later on may be made available rather than depend entirely upon the old stools for a fresh stock.

The immediate cultural work among Chrysanthemums is open-air treatment, safe protection from cold winds and spring frosts, attention to tying the stems securely, and careful watering. Arrears of potting should be no longer delayed, and the shoots of bush-grown plants should not be allowed to get long before being topped. H. SHOESMITH.

**Too long names.**—Continental raisers seem to be just as persistent as ever in putting into commerce novelties with ugly or inordinately lengthy names. From one or two of the catalogues I quote the following: *Souvenir de Mlle. Hélène Ambanopulo*, *Lutilloux*, *Souvenir de sa Majesté le Tzar Alexandre III.*, *S.M.I. la Tzarine Marie Feodorowna* (two of the longest perhaps on record), and *Souvenir de M. Auguste Nouin*.—P.

**American nomenclature**, if wanting occasionally in elegance, is at any rate distinctive. We seldom find names that have been used for Chrysanthemums before, a fault for which the French, however, are particularly noted. The most striking examples from the States this season are *Brigand*, *Diavola*, *Experiment*, *Bronze Giant*, *Autumn Leaves*, *Octoroon*, *Parting Guest*, *Oakland*, *Millbrook*, *Philadelphia*, *Jayne*, *Nemesis*, *Sunrise*, *Radiance*, and the like.—CHRYSANTH.

**Prices of new Chrysanthemums.**—In striking contrast to the prices asked for some of the new French varieties, it may be mentioned that the American seedlings are offered at an average of 2s. per plant of each variety. This difference alone ought to be some encouragement for our dealers, who are heavily taxed in the matter of importation, to give preference to the productions of the American growers, amongst whose flowers the percentage of good is just as high as in the consignments from France.—P.

**A Chrysanthemum from Japan.**—One of the French raisers is offering a new Japanese variety which is said to have been raised from seed imported from the gardens of the Emperor of Japan, an occurrence which we may suppose to be somewhat common now-a-days, judging by the announcements that have already appeared. It is named after *M. Toukouba*, who is the director of the Emperor's garden at Tokio, and who is referred to by Mr. James Veitch in his article, "The Chrysanthemum in Japan," written for the recently published "Chrysanthemum Year-Book."—C.

## ORCHIDS.

## LÆLIA ELEGANS.

THE origin of this beautiful Orchid was not suspected for a long time after its introduction, its reputed parents being at the time probably unknown to cultivation, but by modern authorities it is considered to belong to the newly-established genus *Lælio-Cattleya* (Rolfe). The founder of this genus has so clearly proved *L. elegans* to be a bi-generic hybrid, that there can be little doubt about the matter. For garden purposes it matters little whether we call it *Lælia* or *Lælio-Cattleya*. Most of the varieties of *L. elegans* are considered to be natural hybrids between *Lælia purpurata* and *Cattleya guttata* Leopoldi, though some are classed as the progeny of the former species crossed with *Cattleya intermedia*. Whatever their origin they are all exceedingly beautiful Orchids, and worthy of the best care that can be bestowed upon them. They may be successfully

garden. The flowers, produced at various times during the summer and early autumn months, last from three weeks to a month in good condition if carefully protected from moisture. They are often from 5 inches to 6 inches across. The typical form is described in a horticultural periodical of 1850, soon after its introduction, as being bright rosy pink in ground colour, pale yellow at the base of the petals, the lip three-lobed, wavy on the edge, the side lobes white, the middle lobe deep purple. This almost exactly corresponds with the *L. elegans* of the present day.

*L. E. ALBA* is a nearly pure white form of the type, with the exception of the lip, which has the deep purple blotch on the middle lobe marked with white and shaded on the edge with a rosy lilac tinge.

*L. E. BLUNTI* is a dark-flowered variety with sepals and petals of a bright magenta-purple. The lip is white, tinged with rose at the base, the front portion being light crimson.

*L. E. BROOMIANA* is described as a dark coloured form, the sepals and petals broad, deep purple at the points, gradually paling to light rose at the base. The lip is intensely and richly

*L. E. MELANOCYLUS* is a pretty variety with light purple sepals and darker petals; lip rosy purple in front, the side lobes white, tipped with bright rose.

*L. E. MOSSIE* is another grand dark form, the crimson-purple ground being sparsely covered with reddish spots. The throat and tips of the side lobes of the lip are deep crimson.

*L. E. NYLLETHA* bears large flowers, the sepals tinted yellow and rose, lightly spotted towards the tips with purple, the petals similar in ground colour, but broader and rather more suffused with purple than the sepals; the lip bright purple in front, paler in the side lobes.

*L. E. PRASIATA*.—This variety has a greenish tinge to the rosy sepals and petals; the lip white at the base and side lobes, the front crimson-purple.

*L. E. SCHILLERIANA* and its varieties *enspatha*, *irrorata*, *magnifica*, and *Wolstenholmicæ* belong to the set now grouped under *Lælio-Cattleya Schilleriana*, and are all considered to be hybrids between *Lælia purpurata* and *Cattleya intermedia*.

*L. E. TAUTZIANA* is a magnificent variety, which has very broad sepals and petals, the former light, the latter deep purple, the side lobes of the lip white, distinctly and finely tipped with purple. There are two yellow blotches in the throat, the front portion deep velvety purple.

*L. E. TURNERI*, the subject of the accompanying illustration, is one of the finest in the genus; in fact, there is no question about its being one of the best Orchids in existence. It was named in compliment to the late Mr. J. A. Turner, of Manchester, and bears very largely richly coloured flowers. The sepals and petals are bright amethyst-purple, with deeper veins, and the lip has a well-defined magenta-purple blotch on the front lobe; the side lobes are white, tipped with light rose.

There are several other varieties of this superb Orchid, all more or less distinct and valuable, some quite unique, but enough have been mentioned to show the importance of the section. A great many varieties, the darker forms more especially, are valuable on account of their flowering towards the end of the summer at a time when Orchids of the best kinds are becoming scarce, and at the late August and September shows well-bloomed plants frequently take very high positions. H. R.



*Lælia elegans Turneri.* Engraved for THE GARDEN from a photograph sent by Mr. W. Taylor, Glasgow.

grown in pots and a good rough open compost, such as suits *Cattleyas*, and are safer rather under than over-potted. It seems hardly necessary here to go into details of culture, which have been from time to time given in THE GARDEN. Briefly, they require the freest ventilation consistent with a suitably high temperature, only sufficient shading to prevent injury to the foliage and an atmosphere not liable to fluctuations of heat and moisture. A suitable temperature is 55° at night, 60° by day in winter, while in the summer 60° by night, running up by sun-heat at closing time to 75° or 80° will be ample. The pseudobulbs attain a height of from 18 inches to 2 feet or over, and usually bear a pair of oblong, leathery green leaves. From between these the seapes are produced, bearing flowers in accordance with the strength of the plant, from three to six being the usual number.

*L. ELEGANS* is a very variable Orchid, discovered originally by a collector for the late M. A. Verschaffelt in St. Catherine's Island, South Brazil, and introduced by him to the Belgian

coloured on the front lobe, the side lobes becoming much paler towards the throat.

*L. E. BLENHEIMENSIS* is a grand form with large and highly-coloured flowers. This and the varieties *Duchess* and *marlboroughensis* first flowered with Mr. Whillans, gardener to the Duke of Marlborough, at Blenheim Palace.

*L. E. EMILI* is a white-flowered variety, not so strong in growth as some of the preceding. The lip has a broad wavy margin of rich magenta, which is intensified in the front or middle lobe.

*L. E. GIANTEA* is a large nearly white form with light rose-coloured spots, rather indistinctly and irregularly marked. The lip is purple, with light violet lines shading to a white base.

*L. E. INCANTANA* has the sepals and petals whitish, suffused with violet; the lip white at the base, spreading and wavy on the outer edges, and, like the front lobe, bright magenta-purple.

*L. E. MEASUREIANA* is a peculiar, but very attractive form, with light yellow sepals and petals, bordered with purple; the lip prettily streaked and spotted with purple under the column, and the usual deep purple blotch in front.

*Oncidium ampliatum majus*.—This fine species produces bright yellow blossoms upon an erect scape, which often attains a height of 3 feet or more. This is much branched, and during the months of May and June carries a quantity of flowers, which, if not sprinkled by water from the syringe, will last a long time in perfection. It is a very showy species and makes a grand plant for exhibition. I have noticed this doing remarkably well this season in several gardens. It succeeds best when placed at the hottest end of the *Cattleya* house with a nice moist atmosphere. It was discovered about sixty years ago in Costa Rica.—G.

*Phalænopsis Luddemanniana*.—I recently noticed a very fine specimen of this grand Moth Orchid with thirteen flowers upon two spikes. The flowers are each about 2 inches in diameter, with pale yellow sepals barred with reddish brown.

the petals about equal or rather smaller in size, bright purple, with brownish blotches, the margins of each being nearly white. The lip is small, bright purple in front, the side lobes white and yellow. This species was introduced by Messrs. Low and Co. in 1864, and is very variable in the colour of its flowers. It is a native of the Philippine Islands and requires but little material round its roots to grow it to perfection. A small quantity of good living Sphagnum Moss to hold the moisture is all that should be attached to the block or cylinder.—W.

**Cypripedium Elliottianum.**—I have received a remarkably fine variety of this from Mr. Joseph Broome, of Sunny Hill, Llandudno. When first imported it is generally a difficult subject to establish, but it is well worth any attention that may be bestowed upon it. The flowers from Mr. Broome are of fine form and substance, the dorsal sepal large, pointed, ivory white, and streaked with brownish crimson veins, the lower sepal similar, but smaller, of a lighter ground colour and not so densely striped. The petals, which stand out at right angles, are nearly a foot across, broad, with undulated margins, spotted with lines of red at the base, which terminate in lines of reddish brown from about the centre. The lip is also large, in form very much like that of *C. Stonei*, ivory white at the base, in front completely flushed with rose, reticulated and veined with a much deeper colour. It is a very fine form, being larger than usual, and the broader segments with the zebra-like stripes are very effective. This species very much resembles *C. Rothschildianum* in nearly every respect, although it is considered to be distinct. One feature is very observable in the blooms; the petals in *C. Elliottianum* stand out stiff and quite at right angles, whilst in *C. Rothschildianum* they are drooping. The best position for this lovely kind is in the East India house.—G.

#### LÆLIA PURPURATA.

**LÆLIA PURPURATA**, one of the showiest Orchids yet introduced from South America, will now be commencing to bloom. It was first discovered about forty-eight years ago and introduced by the Belgian nurseryman, M. Verschaffelt. It flowered in this country for the first time in Messrs. Backhouse's establishment at York, since which time it has always found much favour. This plant is a native of Brazil, growing in the province of Santa Caterina, from whence it has been imported in immense quantities for several years. When not in bloom it forms a striking and noble object, with its long pseudo bulbs and long, leathery, evergreen leaves. These latter often measure between 1 foot and 18 inches in length. To succeed well with this fine *Lælia* the plants should be well exposed to the sun and light, which will induce them to produce strong growths and an abundance of blooms. During the winter months the plants that may not have properly finished their growths should be encouraged to do so by carefully supplying moisture and not allowing the temperature to be lower than 60°. *L. purpurata* commences to make new growths directly the flowers are past, when the repotting should be done as speedily as possible, care being taken to have the pots well drained, and using for compost fibrous peat and Sphagnum Moss. For newly-imported pieces, which should be selected with good dormant eyes, the best plan is to place them in pots or baskets with nothing else but broken crocks, firmly fixing the plants in an erect position. These should be kept in a moist and shady place and frequently sprinkled with the syringe.

During the last few years *L. purpurata* has become a remarkably cheap plant and within the reach of all, owing to the large importations which are frequently arriving. The flowers are

borne on robust peduncles, which carry from three to eight blooms, individually measuring 7 inches and 8 inches in diameter. These appear usually from the middle of May till the end of July, and if kept dry will last quite six weeks in perfection. This plant will no doubt take a very prominent position in all our exhibitions for the next two months, as it is one of the most showy and useful kinds we have for this purpose. A good typical form may be described as having sepals and petals similar, the latter broader, mostly white, but sometimes flushed with pale rose and veined with a deeper shade. The front lobe is spreading, with fringe 1 edge and of an intense rich purple, veined with a very deep maroon, the lines of this colour passing direct to the base through the yellow throat. Where the necessary convenience is at command, this free-flowering *Lælia* deserves a place in every collection. Amongst the named varieties that have appeared from time to time a few are especially worthy of notice.

**L. PURPURATA BRYSIANA** is a very distinct variety, having the sepals and petals of a fine light rose, veined with a deeper shade, whilst the front lobe of the lip is deep rich purple.

**L. PURPURATA RUSSELLIANA.**—A charming contrast when placed side by side with the other varieties. The sepals and petals are white, tinted with pale lilac; the lip is also lilac, but of a deeper shade, veined and reticulated with rosy purple; the throat rich yellow.

**L. PURPURATA SCHROEDERI.**—The sepals and petals of this are pure white, as is also the lip, excepting the tip, which is slightly flushed.

**L. PURPURATA WILLIAMSII.**—This is a richly coloured kind with rose sepals and petals, veined and reticulated with purple; the lip is also of an intense rich crimson-magenta, tipped with rosy purple.

**L. PURPURATA ARCHDUKE** is possibly the deepest coloured kind that has been introduced, the flowers being large, and, like those of the preceding form, distinguished by their broad segments, which in this are rosy purple, the lip being very deep maroon.

**L. PURPURATA MANDALANA.**—This is of the purest white, with three very pale streaks of mauve running down the lip. This is no doubt the purest white form that has appeared.

G.

#### ONCIDIUM CUCULLATUM.

As the plants of this pretty species go out of bloom they may be repotted or surfaced if necessary and put in order for the growing season. All the varieties of this *Oncidium* are found growing at considerable elevations, and will not thrive in a stuffy, heated atmosphere. What they like is a quite cool, moist and airy temperature all through the year. If convenient they thrive well in small pans suspended, though this is not absolutely necessary. A good deal of water being required at the root, the drainage must have special attention. Thus treated they are exceedingly pretty, and the fine flower-spikes produced under these conditions make them favourites wherever grown. The typical

**O. CUCULLATUM** is a native of New Grenada; the flower-scapes are erect, bearing many flowers; the sepals and petals rosy purple, the lip broad, rosy white, shading to white, sometimes wholly rose, spotted with deep purple.

**O. C. CHESTERTONI** is a very bright-coloured form of the type, with narrow sepals and petals, the lip spotted with bright red.

**O. C. FLAVIDUM** is a yellow-flowered variety, quite distinct from the type, but similar in habit and shape of inflorescence. The lip is purple, with a white margin.

**O. C. MACROCHILUM** is a strong-growing, large-flowered variety. The segments are crimson-purple, the lip mauve, with violet spots. Quite distinct from all the others is

**O. C. SUBGENUM**, a variety said to be found at a greater elevation than any other: it is on this account known as "the Orchid of the clouds." The pseudo-bulbs are shorter than in most other varieties and the blossoms are dull purple, with a white spotted lip. This and

**O. C. PHALLENOPSIS** are frequently classed as species. The latter is a charming and distinct Orchid, the ground colour white, with varying purple and crimson markings. All the varieties are well worth growing. They usually flower in early spring and last a considerable time in full beauty. R.

#### CULTURE OF WARSCEWICZELLAS.

JUDGING from the few examples one comes across in collections, these Orchids are usually considered difficult to grow, and it is a fact that in order to be successful with them a good deal of care and judgment is necessary. This and the allied genera *Huntleya*, *Pescatorea*, and *Bollea* are peculiar in having no pseudo-bulbs, and although they require different temperatures, their treatment in other respects is almost identical. The best position for *Warscewiczellas* is a shady part of the *Cattleya* house, more heat than is here afforded causing the plants to be soon overrun by insects, and thereby weakened. A great point in their culture is to obtain strong plants and to keep them healthy by timely attention, anticipating their wants instead of allowing the plants to go backward from want of new compost or other requisite. Small, weakly plants must have very little compost about them, as the roots, though fairly large, are not produced in sufficient numbers to occupy the compost. Strong, healthy plants with abundant leafage, on the other hand, may be induced to push vigorous shoots through a compost quite as substantial as that used for the majority of Orchids, and it is then entirely the fault of the cultivator if the plants go wrong. It was a revelation to me to see recently some plants of *W. Wendlandi* discolor that had rooted through and through a thickness and quality of compost sufficient for a fairly strong *Cymbidium*, and this in a house closely packed with Orchids of various South American genera. There is, however, a limit to any plant's endurance in this respect, and cultivators will be wise to not rush too quickly into extremes with their compost for this or any other Orchid. What should be aimed at is a medium that, while containing no ingredient likely to become sour, or swell into and among the drainage, yet affords ample sustenance for the roots without continual waterings. Very fibrous loam broken into lumps as large as a pigeon's egg, some nodules of charcoal, and some chopped Sphagnum will constitute the basis for large examples, but a very thin layer of this compost must be given, the pots being filled nearly to the rims with crocks. If the plants are surfaced over with Sphagnum after being repotted, this checks evaporation from the compost and does away with a good deal of watering, which is not advisable with newly-potted Orchids of any kind. Small plants may also be grown on cork blocks dressed with Sphagnum, or, if they can be obtained, pieces of Tree Fern stems. A good deal of attention in watering is needed if grown in this way, and the plants are safest with a little fresh growing Moss about the roots. *Warscewiczellas* require no drying off during the resting period, and it is then the greatest care is necessary. I always remove a little of the Sphagnum from about the plants, but not all of it, as it serves the double purpose of a conductor of moisture to the roots and a guide to the state of the compost. It is perhaps hardly necessary to add that in repotting, every particle of decayed soil, root, or root-stock must be re-

moved, and it is a great advantage if in a bad state at the roots to wash every part of the plant with tepid water, carefully avoiding injury to the eyes or young shoots or puncturing the foliage.

Although not gaudy in colour, Warsewiczellas are very quaint and interesting, and amateurs desiring a change from the ubiquitous Cattleyas, Odontoglots, or other easily grown Orchids will find a good deal of pleasure in their culture, the little additional risk stimulating their faculties and leading them to take greater interest in the well-being of their collections. H. R.

SHORT NOTES.—ORCHIDS.

**Oncidium retusum.**—Some flowers of this very pretty dwarf-growing kind are to hand from "J. L." The sepals and petals are of a deep orange, the lip of a very bright shade of the same colour. It



The Winter Green (*Pyrola rotundifolia*). From a photograph sent by Mr. J. C. Smith, Naudana, Penrith.

is a useful species, of dwarf habit, and can therefore be easily accommodated.—W.

**Odontoglossum madrense** (J. L.).—This is a Mexican species and thrives best with a rather warmer temperature than is usually given the majority of Odontoglots. The flower sent is white, blotched at the base of the sepals and petals with chestnut-purple, the lip having a yellow disc. It is also known under the name of *O. maxillare*.

**Odontoglossum Rossi Amesianum.**—Flowers of this remarkably pretty variety come from Mr. James Cypher, of Bath. It is without doubt one of the most beautiful forms of the type, the sepals and petals deeply marked with dark chestnut, the base of the latter being very much barred, the remaining portion pure white; the lip is also white.

**Cattleya luteola.**—I recently noticed this seldom-seen little species flowering in a suburban collection, under the name of *C. Forbesi*. This is a very dwarf growing species, possibly the smallest in this genus, and no doubt is not so largely grown as many other kinds owing to its not having very showy flowers. These are less than 2 inches in diameter and of a pale yellow colour. I think this is a very late time in the year for it to flower, the usual season being during November and December. A shady and moist position suits it best.—W.

**Odontoglossum Edwardi.**—Under this name "J. L." sends me a striking and fine spike of bloom.

Although the individual flowers are small and inconspicuous compared with those of many other kinds in this genus, it is nevertheless a beautiful plant, and should find more favour than it does. The spikes carry a very large quantity of blossoms of a deep violet colour and very sweetly scented. It was discovered by Edward Klaboch and soon found its way to this country, where it flowered for the first time in 1880.—W.

FLOWER GARDEN.

PYROLA ROTUNDIFOLIA.

THIS is a native plant, but so localised and rare that we shall never become familiar with it unless we grow it in the garden. It is quite good enough to merit a place and will well repay us with its beauty for such care as it needs. Its popular name of Winter Green happily expresses the beauty of the plant in winter, with its tufts

family and very attractive at this season. Its large clusters of yellow and white flowers appearing above a mass of deep green foliage make the plant rather conspicuous. The leaves are deeply divided, giving the plant a most beautiful appearance. *Corydalis nobilis* with me does best in the shade, and at the present time there are over thirty clusters of flowers fully open.—W. H.

DAFFODILS AT LONG DITTON.

THE merits of the best known Daffodils in their several sections and the fine display they make in the grounds of those who grow them in quantity are familiar to readers of THE GARDEN. Something, however, may profitably be said concerning recent or little-known varieties, and to facilitate observations, Mr. Barr has this year adopted an excellent plan in his nursery of growing a few lines of all the sorts in several special beds, thus saving much labour in examining them, besides affording ready opportunities of comparison. The varieties of each section or family growing so near each other, it was possible at a glance to distinguish those most noteworthy. Among the trumpet-flowered varieties, W. E. Gladstone and Golden Prince, both of the maximus type, were fine, the former light yellow, the latter of a deeper hue, with a large expanded trumpet. John Nelson has a graceful flower, of a clear self yellow, with twisted petals, and Lady Dorothy is distinct, having short petals of a light yellow colour, with short trumpet of a deeper hue. M. J. Berkeley, also after maximus, has a large, expanded, rich yellow trumpet, and Sharnan Crawford is similar, the edge of the trumpet deeply lobed and the creamy petals gracefully twisted. Dick Sartoris is a distinct Daffodil, the base of the flower on the outside being rich yellow, shading to pale cream at the tips of the petals, which are imbricated and project towards the mouth of the long trumpet.

In the bicolor varieties Dean Herbert is one not much grown, tall and handsome. J. B. M. Camm is superb, a sturdy grower, free flowering, pale in colour, the petals creamy white, the trumpet of the palest yellow, becoming with age nearly as light as the petals. C. W. Cowan has a fine nodding flower on a tall stem with twisted petals, the only bicolor variety having this characteristic. Mrs. J. B. M. Camm, dwarf and fine, and Princess Ida, pale cream with flush of brighter yellow about the mouth of the trumpet, are charming, and W. P. Milner is a dwarf free kind with a flower much like that of pallidus præcox. In the star-flowered varieties C. J. Backhouse is distinct, with a large flower and a rich orange cup. Gloria Mundi is one of the finest, its petals deep yellow and its large expanded cup of a bright orange colour. Beauty has a fine flower, extra broad in the petal and borne on a tall, strong stem. Magog is distinguished by its large, open, rich yellow cup. Princess Mary has fine broad, white petals and clear yellow cup, and Commander is even finer, broad in petal, with a long fringed cup, extra bright in colour.

Among the Barri varieties, Maurice Vilnorin is one that should become popular, being dwarf, free and distinct, with yellow petals and a neat rich yellow cup. Flora Wilson is a grand kind, the petals almost white, the cup edged with bright orange. Dorothy Wemyss has creamy petals and a bright cup prettily fringed at the edge.

**The Virginian Cowslip** (*Mertensia virginica*) is blooming very freely this season at the present time. On a small bed which is made up with peat there are hundreds of beautiful clusters of light blue flowers. It has been in bloom for the past fortnight. The first flowers are just fading, and these have a pink tinge.—W. H.

**Corydalis nobilis.**—This plant is not grown so much as it ought to be. It is the best of the

The Leeds varieties are especially pure in colour and charming in effect, yet perhaps no section of the great Daffodil family is so little known and grown. The finest of all is Duchess of Westminster, which has a flower of fine proportions and exquisite purity of colour. Beatrice, with pure white petals and neat cup, and Fanny Mason are pretty varieties. Gem is a distinct kind in this family, having large flowers with a long cup rather inflated in the middle and contracted at the mouth. Quite opposite in character is Mimie Hume, which has a widely expanded cup. Catherine Spurrel is a free-flowering variety that has been abundant at the shows this spring, having pure white petals and lemon yellow cup. Madge Matthews has a graceful starry flower, with twisted petals and a tube-shaped cup. Princess of Wales and Mrs. Langtry both have pretty fluted cups, that of the latter having a bright yellow edge. Narcissus Nelsoni major, like a miniature bicolor trumpet Daffodil, is a distinct and effective kind, with short, broad white petals and a long neat cup. Two varieties of it worthy of note are aurantius, which is extra rich in the colour of its cup, and Mrs. Backhouse, having a long cup. A fine variety of *N. poeticus* is that called grandiflorus. It has an open, long-petalled flower on a tall stem, the cup edged with deep red regularly defined as a distinct margin round the edge.

#### NOTES ON HARDY PLANTS.

**Megasea africana.**—Under this name I have long grown a very dwarf form with medium-sized leaves of a very thick substance and bright in colour. It is hardy beyond question and blooms earlier than Stracheyi by nearly a month, the flowers, which are borne in crowded spikes, being pure white. So close are the flowers to the ground, that the spikes of blossom present the effect of a white Hyacinth without bare stem. It is a capital subject for the rock garden.

**Anemone blanda**—a superior strain which I received from Asia Minor, and which I had a note about in these columns last year—yet sustains its reputation. The pan of tubers has not been disturbed in any way, and I now have come to believe that the improved features are permanent. These consist of flowers 2 inches to 2½ inches across. The corollas are much fuller—in fact, the petals are partially imbricate. I find blanda seeds profusely and self-sown seedlings come up all round. I fancy that the many washed-out colours one sees now of this are seedlings that have got crossed in gardens with apennina.

**Epigæa repens.**—One does not see or hear much of this, but it is really too sweet a subject to be neglected. I suppose the two chief difficulties with it are the securing of good growing specimens and the provision of suitable conditions of culture. As I have said before, young or seedling plants are the best even if much smaller; then, if you give peat and loam, with some pieces of sandstone to prevent evaporation, you will not be likely to err. Of course the district should be a fairly good one for general gardening, and an east aspect, with shade from powerful sunshine, is all the better. I have found it best to plant in positions somewhat depressed or dish-shaped; this secures to the plant the moisture essential.

**Shortia galacifolia.**—This is now in flower in the open air. It is often asked if this gem is quite hardy. Of course it is, but I will add one fact. One plant now in flower here is on a raised bed in ordinary loam. It has been there for three years this spring without in any shape or form the least protection either from cold or sunshine, and the plant is spreading its leaves as red as Thorn berries. It grows till late and begins early. Always beautiful in flower, the blossom is larger and purer when produced under glass.

**Ranunculus anemonoides.**—Evidently this plant has been benefited by the extreme cold of the past winter. I never had or saw the flowers and leaves finer than now. The flowers came in March, and a succession is promised for some time yet. Each flower is the size of a florin and rosy white. In a moist chink of rockwork a little group is an exquisite picture. A very deep seam of soil is the best. For a plant so humble the roots are both stout and long, and it flowers freely only when the roots are in a suitable medium.

**Anemone Pulsatilla**, which used to be and is probably still called Coventry Bells and Hill Tulip, as well as more generally Pasque Flower, or Easter Flower, is singular for the almost invariable habit of coming into blossom at Easter, even when the winter has been prolonged and severe, like the one just gone. Unlike most other Anemones, it has a decided preference for lime, being found wild on chalk hills. It is also very variable, so much so that some forms are hardly recognised from the more refined and less robust *A. Halleri*. J. Wood.

Woodville, Kirkstall.

#### GARDENING AT PENZANCE.

EVERYONE knows of Penzance as a beautiful Cornish town very near to the Land's End, and together with Newlyn forming a horseshoe or crescent around the shores of Mount's Bay, from the blue waters of which St. Michael's Mount rises like a castle-crowned rock pyramid, just as does its namesake near Avranches, in Brittany. Cornwall is just now very beautiful with its Primrose banks and grey Oak woods, its tender young Larch, and wild Cherries white with blossom; but Penzance is specially interesting, as its inhabitants are so fond of gardening in the fields and even in the heart of the town itself. Broccoli and new Potatoes are largely grown in this locality, and there are fields of crimson Wallflower that have escaped the scathing frosty winds of the past winter, and now fetch a good price in the market. Even here, however, there are signs of the bad weather, even the Gorse bushes being browned and in some exposed places killed to the ground. Conifers also have been badly scorched, and Veronicas, Eonymuses, Myrtles, Bamboos, Blue Gum Trees (*Eucalyptus*), Cordylines, and New Zealand Flax are all more or less injured. Curiously enough, the old and presumably hardy *Rhododendron ponticum* is badly cut, even worse in many places than are the hybrid seedlings. Everyone in Penzance cultivates plants and flowers, and even the windows of the smallest cottages contain plants of many kinds not usually seen in such restricted quarters. Begonias, Oxalis, Fig Marigolds, Mimuluses, Cacti, and Aloes are common, and in the villas the Arums and Azaleas, choice Palms, Ferns, and India-rubber Ficus are beautifully grown. In one window I saw a fine *Sparmannia*, and in others *Pelargoniums*—not only zonals and fancy or show kinds, but even some of the old species long ago figured by Andrews and Sweet in their monographs of these once fashionable flowers. In some little windows Musk and *Saxifraga sarmentosa* are beautifully grown, and everywhere, in front of the houses and trim little front gardens, planted as hedges or on walls, are gold and silvery varieties of *Eonymus*, the brilliancy of the golden forms being most effective. The *Eonymuses* are used here and all along the south coast in many pretty ways, and, as grown on walls, porches and pillars, they form a close carpet of gold or green, quite different in effect and texture from the Ivies so generally used in similar positions in more inland or northern places. There is a

small, but nicely kept public park, called Morrab Gardens, in Penzance, the lawns lying up the slope of the hill facing Mount's Bay. It contains a few groups of Elm and other trees, including Apples, Mulberries, and a quaint old Medlar with a twisted trunk, and evidently planted long before the gardens themselves were formed. A rock-edged pool is filled with aquatics and gold fish, and there is a public library, and a record of temperature, &c., is posted daily on the door. There are here some five clumps of *Bambusa Metake*, and good plants of *Cordylina australis*, *Agaves*, &c., but isolated too much instead of being placed in bold groups.

The fruit trees in the little gardens are full of blossom, and there are little lawns and beds or edgings of Auriculas, Primulas, Arabis, &c., on all sides, and one may safely say that fish and flowers appeal to the Cornish people more forcibly than to the fishermen elsewhere, excepting, of course, those of the adjacent Isles of Scilly. A fertile soil, warm and sandy, and a genial climate no doubt exert a great influence on cultural traits of this kind, and enable the Cornish cultivators to compete successfully in our markets with foreign growers, although they are very heavily handicapped by their produce having to make such a long railway journey. F. W. B.

#### THE AURICULA.

As I write these lines we are within two weeks of the exhibition, and I have not in my large collection half a dozen fully developed trusses amongst the edged varieties. Growers in the north say that no flowers can be out in time. We are now getting very fine varieties in the self class, and these are always ahead of the edged flowers. At the present time (April 9) there are about thirty fine trusses of yellow self seedlings developed in our collection; these of themselves make a fine display. The yellow selfs, although they are to all intents and purposes show Auriculas, have not been good enough to be exhibited as such. The very pretty yellow self Buttercup raised by the Rev. F. D. Horner is far ahead of any other yellow self, and when at its best might very well be admitted as an exhibition variety. For garden purposes there are a number of varieties, yellow with grey, green and white margins, which are very pretty indeed. I exhibited a bronzy yellow a year or two ago under the name of Old Gold, which was certificated.

If the weather continues favourable, the plants make rapid growth after the middle of April, but I would warn fanciers of the danger of forcing them either by artificial heat or exposure to the sun. Artificial heat with little ventilation draws the plant up, the stems are weakened so that they cannot hold the trusses erect, the corolla (or pip) is contracted to half its size, and so poor are the flowers that it does not seem worth while to spend time and money cultivating them. On the other hand, exposure to bright sunshine has a disastrous effect in shrivelling up the flowers as soon as they expand. The best results are obtained by allowing the flowers to develop slowly. They must be lightly shaded from sunshine as soon as the trusses begin to develop and air must be admitted freely, but not so as to expose them to draughts. The delicate texture of the corolla is much injured by exposure to the wind blowing through the house; it is better not to allow this for other reasons. Preparations must be made to re-pot the old plants, and the young off-sets should also be potted on as they require it. Overpotting must be avoided, and the plants should be re-potted rather deeper than they were before. During the autumn and winter season they lose their leaves, leaving bare stems an inch or more in length. When the plants are turned out of their pots part of the old soil should be removed and the base of the main roots examined, as sometimes decay has set



in. All the decayed portion should be removed, and this will allow of the plants being lowered sufficiently to bring the lower leaves down almost to the surface of the soil. Drain the flower-pots well and pot firmly in good loam four parts, decayed manure one part, leaf-mould one part, and a moderate proportion of coarse sand.

As soon as the flowering period is over the plants should be removed to frames on the north side of a wall or building of some kind. In order to get the seedlings to flower well next season they must not receive any check during the summer, and should be potted on as they require it. As the warm weather sets in, green-fly will also increase in numbers, and this troublesome pest must be got rid of at all hazards. I find fumigating with tobacco smoke is the best way to deal with it. The white woolly aphid which attacks the roots is troublesome enough, but it does not do anything like the mischief that green-fly does. In repotting, the woolly aphid should be removed from the roots, especially where it has fastened on the neck of the plants. J. DOUGLAS.

**Ixias and their allies.**—There is a class of bulbous plants represented by the *Ixias*, *Sparaxis*, and *Babianas* that possess the great merits of cheapness, simple cultural requirements, and remarkably showy blossoms totally different from anything else in our greenhouses. Pretty though they be, these plants are very seldom seen. A great many are grown in the Channel Islands, and large numbers are sent from there in the shape of dry bulbs during the autumn months. They reach here as a rule about the same time as the Tulips, Hyacinths, &c., from Holland, where also the *Ixias* are largely grown. A very convenient way of growing them for greenhouse decoration is to put about eight or ten bulbs in a pot 5 inches in diameter. A frame or a light position in the greenhouse will suit them well in the winter, during which time care must be taken not to over-water them, as the roots will not be particularly active, and in all stages the plants are very impatient of an excess of moisture. This must be particularly guarded against when they are planted out of doors, as in a nice warm border in the front of a greenhouse and facing the south they will in some places do well. As they commence to push up in the spring care must be taken that they are not allowed to draw up weakly, otherwise a good deal of their beauty is lost. When grown in pots the bulbs generally become weaker after flowering, but they can be obtained at such a cheap rate that they give a good return for the outlay the first season. The long wiry stems of these plants stand them in good stead when they are used in a cut state for filling vases and similar purposes.—H. P.

**The Daffodil bloom in the south of Ireland.**—This has been a most protracted season of bloom, more so than for fifteen years within my recollection. Flowers of Ard-Righ, that I always had out of doors at the end of January, were not gathered until the second week in March, and now the third week in April I can gather from nearly every known section. The bloom in quantity has not been that of other years—a general remark applicable to old clumps established in grass, such as *Priniceps*, *Telamonius plenus*, &c. In a cottage garden close to this place I have been always admiring the quantities of blossom on some large clumps of *N. priniceps*, where not even one flower appeared this season. Another notable occurrence: Every grower of Van Sion for market will from year to year remark how a season changes the colour and solidity of his flowers. This season—the first for three or four—Van Sion has been very satisfactory, and, what is better still, the flowers have been nearly all solid trumpets, not split up, as in other years. I think the previous summer's hot sun did the mischief in the splitting up of bloom, because I have always noticed more of the effect in hot south borders where the bulbs are not disturbed than in moist northern positions where they have a cool bottom during the resting period. The deeper

one plants the old double white *Narcissus*, and the moister the position, with ample drainage, the larger and finer the flowers. After all, I have come to the conclusion that all sorts of *Narcissus* thrive best in grass. There is an estate not far from here where for over 150 years *Telamonius plenus* has been allowed to grow undisturbed on a portion of meadow land, which is irrigated annually, and I never saw the blooms finer and more numerous.—W. BAYLOR HARTLAND, *Ard Cairn, Cork*.

**Tufted Pansies from cuttings.**—To raise stock of these plants it is generally recommended that the cuttings should be struck in a frame. I find no necessity for this, and for some years I have put the cuttings in an open border facing west, and here they have struck freely and well, the young plants being stronger and healthier in every way than they were when I used a frame. Even during the past winter not one of the cuttings was injured by the frost, and they emerged from their covering of snow in excellent condition for planting. One strong argument in favour of this plan of striking out-doors is the extra room that can be afforded to each cutting: they are also not debilitated by confinement or neglect of ventilation. I find it a good plan to bury the cuttings very nearly to their tips, as they are not then so liable to suffer from drought. Varieties in both sections that have done well with me are *Violetta*, *Sylvia*, *Quaker Maid*, *Holyrood*, *Bullion*, *Glow*, *Souvenir*, *Golden Bedder*, *The Mearns* and *Perfection*. Besides these I have many home-raised seedlings that have appeared good enough to keep, among them a pure white and rayless tufted Pansy.—J. C. TALLACK.

#### LATHRÆA CLANDESTINA.

SOME years ago, in 1889, I think, some notes appeared on this pretty and interesting parasite which evoked some interest. Since that time the plants here have travelled about 15 feet in a westerly direction and none are to be found nearer than this to their old position. They do not spread themselves about indiscriminately, as all the tufts appear yearly within a shifting radius of 2 feet. This year there are in all sixteen tufts composed of from three to thirty crowns, each crown bearing from ten to fifteen buds, so that when the deep violet flowers, each as large as, and something like in general appearance to an ordinary *Crocus*, are out, the mass makes a very effective bit of colour in its setting of grass. It would be interesting to know of other places besides Kew and the Botanic Gardens at Cambridge where this plant thrives, and also what the best means of propagation may be. Given a proper host and a knowledge of the best means of procedure in introducing the seeds upon it, this would seem to be the proper, if not the only way, as the seeds are very freely borne. Care in collecting the seeds would be necessary, as when they are ripe they spring from the capsule with great force immediately the latter is touched and are easily lost. Kerner, in his grand work, "The Natural History of Plants," which has lately been brought within the compass of English readers, has devoted much space to parasitic plants. Writing of this plant, he says:—

The seed of *Lathræa* germinates on damp earth. The young root of the seedling grows at first at the expense of reserve material stored in the seed, penetrates vertically into the earth and sends out lateral branches, which, like the main root, follow a serpentine course, and search in the loose damp earth for a suitable nutrient substratum. If one of these meets with a living root belonging to an Ash, Poplar, Hornbeam, Hazel, or other angiospermous tree, it fastens on to it at once and develops suckers at the point of contact. . . . These discoid suckers cling to the roots attached by means of a viscid substance produced by the outermost layer of cells.

Before reading this I had intended trying what might be done by inserting seeds in incisions made in the roots of trees selected as probable hosts. This would apparently be unnecessary, even if it did not entirely defeat the object in view. I do

not feel quite satisfied that growing the plant from seed is quite so simple a matter as the above extract would lead one to suppose, otherwise, from the thousands of seeds which must have been widely scattered here during the past eight years, unless they have been eaten by slugs or other insects, the plant would be more plentiful and have a wider range, for the conditions are evidently suitable, the soil is always moist, being at the bottom of a valley and close to a pond, and full of the roots of various trees. Eight years ago the plant was nesting at the foot of a deciduous Cypress: near this was a Portugal Laurel as well as Box bushes. There are also Horse Chestnut, Elm, Holly, Beech, and other trees near enough to have extended their roots to the spot. The tree nearest the parasite at present is a young Sallow about six years old. Tracing the plant to its host has been out of the question, as it would mean destruction to the *Lathræa*, but this year one tuft is so far removed from its neighbours that it may be possible to trace it home without doing any damage. J. C. TALLACK.

#### A SCOTTISH PRIMROSE GARDEN.

WHEN seen in the mass, acres of Primroses, as they are flowering here at present, are delightful, the soft ripples of colour flowing over smooth reaches of lawn, straying over mounds, wimpling in little hollows, or, prettiest of all, surrounding and lapping the bases of grey old Beeches or Planes whose holes are covered with Lichen. The colours of the flowers are nearly all of soft shades and white, but, curiously enough, among the tens of thousands that bloom year by year, one truly wild form is never seen. There are indeed yellow flowers in abundance, but none of the same shade and particularly of the same form as the native Primrose. The plants, moreover, are remarkable as being somewhat erratic in the way they leave one part of the ground and form fresh colonies in erstwhile bare spots. Portions that nearly thirty years ago were thickly covered are to-day almost bare of plants, and other places that twenty years back were green are to-day bright with bloom. Another peculiarity about these Primroses is the scarcity of large plants. Almost without exception they are single-crowned, and where clumps of one colour are established they are apparently the produce of the seeds contained in one capsule. I have noticed this peculiarity more particularly in the case of some plants that were a dozen or more years ago planted out in a bare corner. Seedlings from these almost always appear quite close together in little groups, and the flowers in each group are nearly always of the same colour. This would show that these blooms left to Nature are seldom cross-fertilised, and it further points to these as a valuable addition to those flowers we can enjoy in groups of one colour, nothing being simpler than raising Primroses from seed.

How long these semi-wild plants live it is impossible to determine, but, judging from the difficulty of keeping Primroses and Polyanthus for any length of time in the garden adjoining, I believe they are very short-lived. It adds something to one's interest in these plants that their origin is involved in obscurity. At the commencement of the century they were very numerous, though not so much so as now. The history of the Tynninghame wilderness, which these Primroses do so much to beautify, begins just previous to 1707, when a comparatively small piece of ground, planted by the third Earl of Mar about 1637 to 1640, was so far added to by the celebrated tree planter, the sixth Earl of Haddington, as to form an enclosure of over 14 acres. The ground was trenched and laid out in the French style, with a centre, from which fourteen walks radiated in different

directions. These were bordered with trimmed hedges of various kinds of trees, one that sounds very pretty having been planted with Laburnum alternately with Mountain Ash. One can imagine the beauty of the embowering Laburnums in May and the Mountain Ash in autumn when gay with fruit. The interspaces between the alleys were planted with a variety of trees, of which Beeches and Planes are to-day superior to any others, though a quarter of a century after they were planted Elms and Ashes were growing the most vigorously. There are now none of the latter, and the Elms are all in a decaying condition. The lines in Thomson's "Spring," beginning

At length the finished garden to the view  
Its vistas opens, and its alleys green,

apply with the utmost exactness to what must have been the general appearance of Tynningham and its surroundings at that time. The poet was intimate with Lord Binning, having acted as his tutor, and was most anxious to dedicate "Spring" to his fellow countryman. If we then conclude that here indeed was "Yon mingled wilderness of flowers," the Primroses of the present day must be direct descendants of plants first set out 190 years ago.

Fifty odd years after the wilderness was laid out great alterations were effected on the grounds in the near vicinity of the house. Probably at this period the hedges and alleys were destroyed and the grounds laid out in the natural style, and the flowers would begin to spread. The last of the hedges was not removed till some thirty years ago, when the trimmed Lime tree fence enclosing the bowling green was, on account of old age, grubbed up. Mahonia was planted instead, but it did not succeed, and lately a Yew hedge has been substituted, which in spite of the dry gravelly nature of the soil is progressing very favourably.

In addition to Primroses there are innumerable bulbous plants, two kinds of which, however, never flower. There are also a few Cowslips, which most unfortunately do not increase. An interesting feature in connection with semi-wild bulbous plants is the charming variety among the seedlings. For example, among Snowdrops there are kinds of all sizes, ranging from the tiniest forms to some as large as *Galanthus plicatus*. I noticed a variety this spring with its outer segments increased to six. Mr. Arnott, to whom I sent a flower, considers it quite distinct. Then in Daffodils, I lately picked out over a dozen distinct forms of *Narcissus minor*, the smallest being even less than minimus and the largest and finest an improvement on its parent.

*Tynningham.*

R. P. BROTHERTON.

#### FLOWER GARDEN NOTES.

SUMMER PLANTING.—It is impossible to lay down any hard-and-fast rule as to the arrangements to be made with summer bedding plants. It sometimes happens that the owner has a taste in a particular direction which the gardener has to follow, and even if this is not so, much depends on the style of the garden, its natural surroundings, the size and shape of beds, whether they are isolated on turf or form part of a geometrical design, and many other considerations. There are, however, one or two rules always applicable that may be noted. In the first place, faulty and incongruous mixtures should be avoided, and if a certain number of mixed beds are required—whether they consist of two, three, or several colours—the arrangement requires a considerable amount of taste. This naturally does not refer to plants of the same species as seedling Verbenas or Petunias. Small beds, especially if they are close together and form part of a complicated design,

should be filled with only one variety, with perhaps a single plant of graceful habit to relieve the dwarf carpet. Plants for small beds should also be on a correspondingly small scale. Thus, West Brighton Gem, Surprise, Golden Harry Hieover or Mangiesi Pelargoniums would be far better than, say, Lucien or Amaranth, and the Violetta strain of tufted Pansies better than the Countess of Kintore type. Again, for large beds, if the old-fashioned plan of a centre block and an edging is adopted, the latter should be sufficiently wide to show itself to advantage. A narrow edging or two separate bands of colour from the centre is a style of planting not to be commended. I said above, that a mixture of colours in one bed should be avoided. This applies to several varieties of similar height and not to the judicious blending of a few taller subjects on a dwarf carpet, possibly when well done one of the most pleasing features of summer bedding. In the case, for instance, of tuberous Begonias—free flowering and of vigorous habit, but with the flower-spike inclined to droop—they were formerly planted thickly in order to cover the ground, and under such conditions there was a natural complaint that the greater portion of the flowers could not be seen, and in this case a combination of colour has been made with advantage by planting the scarlet, crimson and pink shades thinly on a carpet of variegated Mesembryanthemum, and the lighter colours on *Sedum Lydium*. In beds of larger size the Fuchsias may be employed as previously recommended, and similar standard or pyramidal plants of Ivy-leaved Pelargonium with the dwarf Pelargoniums noted above as suitable for small beds. Also the mingling of flower and foliage is sometimes very effective. The beautiful variegation of *Abutilon marmoratum* is seen to the best advantage on a bed of purple Petunias, and *Humea elegans* and *Grevillea robusta*, to instance two plants of graceful habit, may be used with many dwarfier subjects. Before passing from the planting of large beds it cannot be too strongly enforced that they should be filled with plants of larger growth, especially where they are standing alone on turf. Large beds that occupy a space of say from 100 square feet to 200 square feet should never be filled with plants like the ordinary Pelargonium or Begonia. If it is deemed advisable to go in for good blocks of flowering plants, tall Fuchsias, Marguerites, free-blooming Cacti and pompon Dahlias, summer flowering Chrysanthemums and Pentstemons rank among the best plants for the purpose. It may, however, be added that in the case especially of larger beds, herbaceous plants of strong vigorous habit and a well-sustained flowering season are the more suitable.

Mixed beds have increased rapidly in favour, until now they may be found to predominate in many flower garden arrangements. In connection with such beds it may be noted that they form an interesting feature when well planted, but are very objectionable if the planting of them is left until the stock is nearly exhausted, and they are then filled thickly with a lot of odds and ends that crowd one upon the other so soon as they begin to grow, so that there is no proper development of individual plants or a general tone of harmony to the bed as a whole. Having decided on the character of mixed beds, it is well to plant first thinly those things that are to be the leading feature, and afterwards to fill in with others that will associate well with them. Scented Pelargoniums in variety that make a comparatively poor show from a flowering standpoint, but which are often very useful for cutting, through the summer months, may form the groundwork of one or more mixed beds, and the majority of them will grow into bushy plants of large size if sufficient room is allowed at planting time. The best of the annuals, as Stocks, Asters, and Zinnias, are sometimes used to fill up such beds as are under consideration, but the practice is hardly to be recommended and is apt to lead to a very incongruous mixture. Writing of annuals reminds one that where they were sown in box or frame with the view that they should presently occupy a some-

what prominent position in the garden, they should be pricked off as soon as they can be handled with the idea of securing good plants. As this month will be a busy one in all flower gardens where bedding plants still predominate, it is advisable to push forward at the present time any work that can be done. East Lothian Stocks, for instance, that have been wintered in frames can be planted at any time, and if the stock is somewhat limited owing to the severe weather in February, they may occupy portions of beds to be presently filled by the spring-sown Ten-week. Any arrangements into which hardy plants enter may, so far as these are concerned, be pushed forward—plants, for instance, like the silvery Veronica, the variegated Grasses, and the like. A broad edging of one of the larger Grasses, the striped *Digraphis*, associates well either with another hardy plant, as *Fuchsia gracilis* or with *Dahlia Fire King*. It has, however, a Couch-like propensity for spreading and should not be introduced among plants of dwarf or tender habit. No mention of hardy plants, especially at this season, seems complete without a little note as to tufted Pansies; they are coming out fast now. The weather experienced in February which was responsible for keeping them back has altered their respective seasons, or rather all are coming into flower simultaneously. There are no specially early-flowering varieties this year.

*Claremont.*

E. BURRELL.

## GARDEN FLORA.

### PLATE 1013.

#### THE AUSTRALIAN LILIES.

(WITH A COLOURED PLATE OF BLANDFORDIA FLAMMEA VAR. PRINCEPS, B. NOBILIS AND B. MARGINATA.\*)

WHILST many good old plant growers are regretting the gradually lessening interest taken in the culture of New Holland plants in general, that of the Blandfordias also appears to be in the same danger of being overlooked. More skill is needed to produce a healthy example of a New Holland hard-wooded plant than obtains in very many instances of present day favourites, and the same thing applies to the genus now in question, but surely this should not in any way act as a deterrent to their culture. It should rather be an inducement to plant lovers to enter into their cultivation with zest so as to overcome any apparent difficulty. One essential, and that a primary one, is a light greenhouse or pit in which to grow Blandfordias, wherein a free circulation of air without exposure to cold currents can be maintained; an ash bottom from which some amount of moisture arises is also no small consideration, but overcrowding or overshadowing by larger plants should be studiously avoided. Two means of propagation are available, that of raising seedlings and that by offsets; the latter is the course usually adopted, but it must not be repeated too frequently or be done in too severe a fashion. Personally I much prefer to grow the Blandfordias in nearly all peat to peat and loam in more equal parts. Peat seems to be more congenial to them, but, as in the case of hard-wooded plants, it should be made quite firm; charcoal is a good addition when the peat is disposed to be at all spongy; sand should in any case be freely used. Potting should be done early in the spring or soon after flowering, but care must be taken not to overpot in the slightest degree. Rather than let them dry off absolutely, I prefer to see some symptoms of leaf growth remaining; the process of drying off too

\* Drawn for THE GARDEN by MRS. ROWAN. Lithographed and printed by Guillaume Severeys.



1 - Ranunculus repens L.  
2 - Ranunculus acris L.  
3 - Ranunculus abortivus L.



severely will often cause injury. It is surprising that such beautiful plants as these are not more admired than they are. Those kinds figured in the accompanying coloured plate represent three quite distinct varieties or species. *B. flammea* var. *princeps* is undoubtedly the finest kind in cultivation; it is a truly noble-flowering plant; the other two are very distinct. Two other species are specially worthy of note, viz., *B. aurea* and *B. Cunninghami*, and to make up half-a-dozen, *B. flammea* would be a good addition. It should be added, in conclusion, that the habit of growth and the appearance when in flower are all that one could wish.

PLANTSMAN.

## THE WEEK'S WORK.

### KITCHEN GARDEN.

**HAND-LIGHT CAULIFLOWERS.**—On early borders the first batches of these will now be so forward that removal of the hand-lights will be necessary, the latter now coming in useful for placing over Vegetable Marrows or similar tender subjects. Presuming that the number of plants was reduced as advised some time ago to three in each light, these will now require steadying by placing some fine loamy soil around the base of each, firming the same with the hands to keep the plants in an upright position and to prevent them from swaying in windy weather. Previous to earthing up, however, I would advise giving a good sprinkling of some quick-acting fertiliser, guano for instance. This will often have the effect of inducing a rapid growth and save the plants from buttoning prematurely. Indeed, the same remark applies with equal force to the younger spring-planted lots of this vegetable, as cold east winds have given them a severe check this season.

**EARLIEST BRUSSELS SPROUTS.**—These sown in February and gradually hardened off after being pricked out into boxes or frames will be in a fit condition for planting now. Select a plot which has been dug for some time and has become somewhat consolidated, as if the plants are put into loose, newly turned soil an unsatisfactory growth will probably follow, with the result that instead of hard knobs forming in September and October, Cabbage-like offsets will form the whole length of the stems. Be the ground ever so firm it will, unless clayey, be benefited by treading before putting in the plants. If the plot has now to be prepared, it will be best to refrain from the use of very rich manure for this early crop, this also producing the evil above referred to. Mushroom manure is very suitable; then if the summer is hot and dry, manure water can be given when the plants are in full growth. Allow plenty of room between the plants and rows for the ingress of light and a free circulation of air, plant with a trowel and firm well. On light soils it may be advisable to also water the plants, and a watch must be kept in wooded districts, as wood pigeons sometimes do much damage to these early green crops. Before planting, draw out a moderately deep drill, such holding the moisture about the roots. On strong soils, however, planting on the level is advisable. Seedlings in the open now well above ground should be freely thinned out; and if covered with netting as a protection against chatfinches, the best way is to remove this, thin out the seedlings, and replace the net for a time, as these pests will often pull up the young plants from sheer mischief after they have grown an inch. The same remark applies to Turnips.

**ASPARAGUS.**—In forward localities cutting will now have become general. Some judgment is needed in this work, as if the knife is thrust too deeply down, the crowns are much injured and future supplies lessened. It is often necessary in warm weather to go over the beds twice daily, in early morning and again in the evening, as the grass soon runs up, and if not cut, opens at the tip, which does not improve either its appearance

or flavour. In regard to storing it until wanted for use, the best way is to place damp Moss in the bottom of a large pan or earthen vessel, and after bunching up the Asparagus not too tightly, to place it on the Moss; this will supply it with sufficient moisture. When placed in water and kept for some days it absorbs too much moisture, and mould is very liable to set in. A cool, dark place is the best. Where blanched Asparagus finds favour the stools should now be covered with some light material, such as leaf-mould, cocoa-nut fibre, or fine soil. This should be arranged in the form of a mound, about a foot in depth; the Asparagus will push up through this, and when the pink tips protrude through it should be bent before it loses its colour. If a broadcast sprinkling of artificial manure was given when the beds were cleaned and surface-stirred, another may now follow, in showery weather. Beware of cutting young beds too hard, as nothing is more ruinous than this practice. Indeed, the same may be said of established beds. A little assistance may now be given to plants that were put out in March, this also having the effect of keeping the roots near the surface.

**EARLIEST CELERY.**—Where an extra early supply of Celery is expected, from the first to the second week in the month will be a good time for removing properly hardened off plants of Sandringham or Early Rose into the trenches. If the latter were prepared as advised some time ago the soil in the bottom will not need treading, but if the preparation has been postponed till now firming will be necessary. Allow plenty of room between the plants, and be sure that they are well watered the day previous to lifting from frames or boxes, or much of the soil will fall from the balls, which is an evil. In exposed gardens it will be necessary to screen the tender foliage from cutting winds by means of a few Yew boughs stuck here and there in the trenches. Where the soil is light and at all inclined to be dry, watering as soon as transplanting is completed will be necessary, but not on strong land. If any suckers cluster around the base of the plants they must be removed; and if possible select a dull, quiet day for planting. This last remark applies to all subjects possessing delicate fibrous roots, a few plants only being lifted at a time. The later crops of Celery must be attended to in regard to pricking off, and if cool frames are not at command, any odd sheltered nook or corner will answer well, giving the roots a good larder and affording some kind of shelter in bad weather. Plants brought on in this way often do better as a main crop, and are less subject to bolting in autumn than are those which are rooted in more heat or on hotbeds. The great point to be observed with heat-raised plants is to remove them to cool quarters directly the seedlings appear through the soil, and to thin out rigorously immediately they can be handled. It is not yet too late to sow seed where there is plenty of spare ground, as even if time cannot be given to blanching, the plants can be used for soups and flavouring generally, and thus the main crop saved for more important uses. For this purpose Leicester Red is as hardy and good as any.

**FRENCH BEANS IN THE OPEN.**—A few rows of some hardy variety may now be sown on a warm south border. Where this is not available sowing should yet be postponed for a fortnight. I prefer Syon House or Ne Plus Ultra for first sowing out of doors. Some recommend Canadian Wonder, but this is so apt to decay if the weather is at all showery and the soil not of the lightest. In sowing, place if possible some light potting soil or similar compost in the drills, which must be shallow. Two inches deep will be quite sufficient, as a little soil can easily be drawn up to the plants when a few inches high. Sow plenty of seed at this date, and also some extra in a warm corner, in order that any blanks which occur may be made up. Nothing gets cleared off sooner by slugs or snails; therefore the moment growth appears, a good dusting of lime, or soot and wood ashes must be given. In a fortnight sow Canadian Wonder for succession.

**FORCED VEGETABLES.**—Potatoes in pits or frames now ready for use must have the lights tilted over them continually, as if exposed to heavy rains a secondary growth is liable to take place, this drawing the flavour out of the first tubers. No more water will beneeited at the roots. Later plantings coming on under frame protection must be well nourished to secure normal-sized tubers. In showery weather, if warm, remove the lights entirely by day, replacing them again at eventide. This saves a deal of labour, and is of more benefit than all artificial waterings. Peas now podding in frames will be benefited first by a sprinkling of artificial manure, and afterwards by a mulch of spent Mushroom manure. The same may be said of Carrots.

**SHALLOTS.**—Rows of these now in active growth must be examined, as frequently worms throw the bulbs clean out of the ground, especially on light soils. Replace the bulbs and firmly tread the soil, afterwards applying a good mulch of rich manure. Nothing pays better for good cultivation than Shallots. J. CRAWFORD.

### FRUIT HOUSES.

**FRUITING PINES.**—The favourable weather during the latter part of April will have brought forward the fruiting plants rapidly, and with plenty of sunshine the forward Queens will be swelling freely, and a few fruits colouring. Moisture at the roots and manure may be given liberally, few manures being equal to guano given in water a little warmer than the bottom heat temperature, using rain water when it can be obtained, and the guano well mixed. Guano may with advantage be mixed with water and placed in the evaporating pans, as this will assist swelling. Temperatures may now range from 75° to 80° during the day, giving air when the maximum is reached and closing early in the afternoon to allow the thermometer to run up to 90° or 95°. With mild nights the house may be kept at 75°, with 5° less in cold, windy weather. To maintain a healthy growth, the house should be freely syringed, the walls, floors, and paths being kept moist, but avoid too much moisture over the plants, especially in dull weather. The bottom heat for fruiting plants should not fall below 85°, and though it is well to utilise the sun-heat as much as possible, if the bottom heat is checked the fruits will not finish well. Plants of Smooth Cayenne, Rothschild, and other late kinds for fruiting in the autumn, and which are failing to show fruit, should be kept drier at the roots. The cultural notes advised above for Queens do not apply to these plants, as if allowed to grow too freely a check may be necessary for a short time. If kept drier at the roots and cooler for a few weeks fruit will soon show, but extremes must be avoided. Plants of the late kinds named showing fruit should get liberal treatment as advised for Queens, and as soon as the fruits show colour give more moisture and a growing temperature, removing the plants into their fruiting quarters, as it is not well to retard them when the plants are showing freely. Early plants with fruits colouring should have less moisture and food as the final stage is reached. If the suckers at the base of fruiting plants are numerous, it is well to thin freely; this assists the fruit, and the suckers left make much better material for potting up later on.

**SUCCESSION PLANTS.**—These will now need liberal treatment, and if potted-up as previously advised, the plants will now be making a sturdy top growth and will have made new roots freely. Night temperatures may now range from 65° to 70°, the maximum in mild weather, and 10° higher by day in favourable weather, 75° being high enough if the weather be wet or sunless. High temperatures or excess of moisture will cause a weak growth. A free circulation of air during the day will promote the short leaf growth so desirable. Damp over all parts of the house at closing time, the plants being lightly dewed overhead. Manure water should not be given till the newly-potted plants have filled their pots with roots, but a genial atmosphere may be maintained

by the use of liquid manure in the evaporating pans. With the houses large or much exposed, shading the plants will soon be necessary. It is well to use a temporary shade, as the plants suffer when much shaded in dull weather. Serimeenvas or tiffany on a roller answers well, as this is so readily removed, and it is only required during the hottest part of the day. Some of last year's plants may not have required repotting when the plants were overhauled in March, but these should now receive a shift, as during the winter the soil becomes sour if not full of roots. The materials previously advised will still do; water sparingly for a time, giving the newly-potted plants a genial bottom heat, and shade till well established. Small plants during the summer months are often grown in frames, and they thrive well in such structures if there is a bottom heat of 70 or 80°. Excess of moisture in frames must be guarded against, as the temperature fluctuates more in frames, little water being required in damp weather. With the early Queens ripening there will be some good strong suckers for potting up, and to make room for these some of the strongest plants may be placed in a warmer house. Thus treated there will be a good succession, and in private gardens this is preferred to a glut at one time. The temperature for what may be termed the small plants should be 65 to 70° by day, according to the weather.

**MELONS—EARLY FRUITS.**—On pot plants, or those in restricted borders, the fruit will now be colouring, and need careful treatment to get flavour. During the final swelling it is well to feed liberally, but this must cease when the fruits are well netted. It will soon be seen when growth is complete by the way the fruits net, and if given too much moisture they soon crack badly. The weather now is most favourable for the growth of these plants, and during the day very little fire-heat will be necessary; but it is well to keep the pipes warm during the day, as this allows of freely airing the plants—a great aid to flavour. Later plants need less air and plenty of warmth, a temperature of 70° by night and 10° higher by day, allowing the temperature to run up to 90° at closing time. Syringe freely all parts of the house. Top-dressings with richer soil will also be necessary, but the stems of the plants must be kept clear at the collar to prevent damping. Make the new material firm, keep the stems as dry as possible when syringing, and water frequently with liquid manure as growth increases. Should canker appear, as it often does after a spell of sunless weather, dress the affected parts with freshly slaked lime and powdered charcoal, keeping the plants drier for a few days, and admitting more air.

**MELONS IN PITS.**—At this season preparations may be made to plant in pits or frames, and though the best results may be obtained from heated pits, with care excellent Melons may be grown in cold frames, or even movable ones, on a bed of hot manure. Bottom heat in any case is desirable, but not a necessity. I have grown good-flavoured fruits on a hard, coal-ash bottom, with a barrow-load of soil for the plants, placing a couple of plants in each light; but more care and less moisture are necessary. The start must be with sturdy clean plants raised in houses or warm frames close to the glass and planted out of the seed-pot, making the soil firm round the roots. For frame culture I do not advise the poor soil often recommended, as without heat, growth is none too robust, and quick growth is essential to get fruit of good quality. Loam mixed with bone-meal will be a good compost, and should the soil be far away from the sashes, it is an easy matter to make a trellis and train the plants close to the glass. Melons planted on manure beds often fail to set owing to their gross growth, the roots going down into the rich food. To prevent that, it is a good plan when making the bed to insert a large pot on slates or tiles, which will prevent deep rooting and cause short-jointed wood, earlier setting, and better finish. Good will be done if only flat slates are placed under the plants before adding the soil to prevent the roots striking down-

wards. The temperature in pits varies, but much may be done to maintain an equable one by covering the glass at night, shutting up early in the afternoon, and keeping the lateral growth thin. Moisture should be freely given in fine weather, but early, to allow the plants to dry by sunset. When damping down, thoroughly moisten the surface soil, as the sudden changes of temperature encourage green-fly; whereas a moist soil and surroundings are not congenial to it. Allow each plant to go a fair distance before stopping, but stop lateral growth at the second joint and set the first blooms if possible.

**ORCHARD HOUSE.**—If at all forced, the fruits in this house will be swelling freely, and will require unlimited supplies of water and food also if the pots are full of roots. It is a good plan at this season to liberally top-dress plants heavily laden with fruit or foliage, this being a great saving of labour, whilst the roots benefit greatly. Plants approaching the ripening stage must only get pure water, as food now will spoil the quality of the fruit, and in damping overhead use rain water or water free of lime, as the fruits soon show lime deposits. More air and less atmospheric moisture must be given as the fruits colour, and the leaves when covering the fruit should be removed or the shoots given a tie to allow the light to reach the fruit. Later trees in mixed houses will need copious supplies of water and liquid manure, syringing freely and airing early in the day. In case red spider or fly should appear, fumigate several nights in succession, syringing freely the next morning. Thin fruits severely when needed, pay daily attention to stopping, and with ample supplies of food there will be no fear of the fruits dropping after this date.

G. WYTHES.

## GARDEN SKETCHES.

### CHAPTER XI.

Only so far as the masters of the world  
Have called in Nature to their need  
Can they reach the height of magnificence.  
EMERSON.

**OCTOBER 7.**—Chill October is with us, but there is neither chill nor damp. A second drought has fallen on the garden, and week after week of sunshine without moisture has left the ground dry as dust, and the plants parched and many of them drooping, but let us for a moment look away from the suffering plants and raise our eyes to the glory that has flowed over the valley before us. In amber, crimson, and gold the trees are clad. If cloudless skies have made the blossoms fewer, the trees have been touched to richer hue, and the scattered woodlands pass in undulating lines of colour as far as the eye can see. To-day the hills in shadow are blue as indigo, only the bold projections are soft grey, with here and there a flush that one knows must be the red-brown Braeken. In the garden one can quickly single out the sun worshippers. *Cytisus racemosus* in freshest green is coming into blossom. *Berberis Darwini* has sprays covered with a second bloom. Some plants of *Salvia*, only a few inches high when planted out of doors, have grown into large bushes, with their pink flowering branches tumbling about on every side. *Hypericum Moserianum*, also planted in spring, has grown well, and is now covered with blossoms. The thick substance of the petals makes them look like solid gold, while the stamens rise like a coloured crown in the centre of the blossom. It is indeed a gem among *Hypericums*. Several beds of *East Lothian Stock* planted out in June have, to my disappointment, commenced to flower now instead of waiting for the early days of spring. *Wallflowers* are dwarf and sturdy, so they are safe not to blossom until the new year.

The fountain garden has suffered especially from want of rain, as the wide-branched *Syc-*

more tree sucks up the moisture all around. The scarlet *Geraniums* are the only perfectly happy plants at present. They have never been so splendid, with trusses some 7 inches across and deep green healthy foliage. All the needed cuttings were taken from them a month ago, so that the fine fresh growth has all been made under a burning sun and in ground parched hard and dry. The *Verbenas* seem likewise to revel in the dry heat, and are a mass of blossom. The *Pyrethrums* are fresh and healthy, and coming into a second bloom. *Carnations* have thriven well; the fresh soil appears to have restored them, and they do not seem to have suffered in any way from want of moisture. On the other hand, the bed of *Lobelia fulgens* is pitiful to see, with drooping and yellow leaves, and the white *Chrysanthemums* in the centre are poor and shrivelled. The yellow bed of *J. Wernig Chrysanthemum*, *Rudbeckia Newmanii*, and *Calceolaria amplexicaulis* is worst of all, being nearly burnt up. The loss of this sulphur-yellow *Calceolaria* makes quite a blank in the little garden. Its blossoms were especially bright and cheerful in autumn days, lasting fresh until the first severe frost, and its growth free and graceful. This *Calceolaria* is a native of Peru, from whence it was introduced in the year 1845, and was much prized before the formal bedding-out system pushed it aside as too irregular in growth. The crimson *Fuchsias* are poor and stunted in leaf and blossom, and the pink *Hepaticas* that border the bed are not distinguishable from the ground itself. The leafage of the *Hellebores* has been greatly injured; at least one half of the leaves has been turned brown, and must now be cut off, being too unsightly. It is just one of those rough bits in the path of "gardening" that one cannot tread across without aching feet. The flowers ask, and we cannot give. They suffer, and we are powerless to help, for the water supply has run short for human beings, and so must be denied to plant life.

**OCTOBER 23.**—Russet leaves beneath our feet, crisp and dry and crumpling as we pass along, tell us that the leafy banners have fallen. But they have still their mission to fulfil. Gathered and stored together until they decay, they become most valuable as a quickening, revivifying force to plant life, and though for the moment crushed under our passing tread, they shall live again and wave above us. The autumn leaf-collecting is very important, and being the natural manurial stimulant for plants, is the most fitted for many choice flowers. A pit into which they can be thrown as gathered hastens their decay, keeping them damp when rain falls, and the whole heap can be turned over in spring, which will still further assist in their decay.

Some showers have at last visited us, so that the earth's surface at least is damped, and verdure is returning to the lawn where a few *Daisies* have ventured to uplift their heads. The *Star-worts*, with all their soft shades of purple, lilac, lavender, and dusky blue set among the gold and russet hues of changing leaves, are an October garden in themselves, but this autumn they are very poor compared with other seasons. Sun they must have overhead, but moisture at the root they seem to demand equally, their mass of fibrous rootlets exhausting the surrounding ground very rapidly.

The *Arum Lilies* have just been lifted. They were planted out in the garden in rich soil during the month of June. Fresh fibrous loam mixed with some leaf-mould and a little peat has been used to repot them in. Last year I added some old manure, but found that their leaves constantly turned

yellow. When in full growth, manure water and soot water may be used with advantage. These Lilies of the Nile, growing naturally in water, must be always well supplied with it. Planted in a pond they will live out of doors all winter, although in the open ground they will not survive unless in very favoured localities. The Daturas, which were likewise planted out during summer, have also just been potted. Though killed to the ground by winter frosts, they will spring up again from the roots, but these young shoots are so long in coming into blossom, that I find it better to lift the plants and keep them in the greenhouse during winter, so that they will come quickly into flower when planted out in summer. *Sparmannia africana*, sunk in a pot, is still in blossom in the rock garden, but will be brought indoors on the first appearance of frost.

The beauty of the Begonias being over, they have been taken up and stored away in a box filled with the soil in which they were growing. Their stems will gradually wither away, and then they can be packed in sand, neither too dry nor too moist, and placed out of the reach of frost.

Now is the time to look around and note any alteration to be made, or plants to be divided or removed. While the ground is yet warm, plants root quickly in their new quarters and have time to become established before the frost of winter. The end of September is generally the best season for planting, but this year it was at that time too hot and dry.

Flowers for cutting are at present so scarce because of the drought, that one is glad to see leaves and berries for indoor decoration. The wild Rose hedges from the hedges, with the tinted foliage of Bramble sprays, make a fine group, and the fading leaves of Strawberries, as they change to crimson, afford a rich setting for the white *Chrysanthemum* Daisies. In the arrangement of flowers how often do we see them overcrowded to such a degree, that all their distinctive character and beauty of line and curve are lost. In arranging flowers the chief thing is simplicity and freedom, combined with balance and harmony. In Nature, symmetry is rarely or ever met with, but everywhere, whether it be in the lines of a mountain or in the curved petals of a Lily, harmony and proportion are to be found. In using the word "flower" we are apt to think only of the blossom itself, but in floral compositions the word ought to be understood in its wider sense of the flower-clad stems of plants, or flowering branches of trees. We must remember that each plant has its own special message of beauty to deliver, and if we over-fill our vases this message is lost, or never uttered, in the intricacy of overcrowding. If one takes away from a flower the elegance of its stem and fine curvature of its leafage, we rob it of half its beauty, for the flowers, as we have learnt from Ruskin, are but "the leaves in bridal array." Therefore, in arranging flowers, we should be so sensitive to the delicate display of their exquisite proportions, that such a thing as cutting their stalks all the same length to make them look even, or filling in blossoms to prevent a vacant space, would be impossible. Flowers should always be cut with a length of stem sufficient to show the habit of growth, and a few such sprays placed in a jar or simple glass vessel will have a far more attractive effect in a room than many times the amount of flowers with short stalks all crowded together. Blossoms should, if possible, always be associated with their own foliage. For instance, a vase full of Carnations mixed with their own blue grass is twice as beautiful as when the leaves of any other plant are sub-

stituted. A group of blossoms of one kind, such as Roses in an old china bowl or Lilies in a vase, are always delightful, but two or even three different kinds will assort well together. After that a greater mixture loses its power, and takes away from the sense of repose which true beauty always suggests. The simpler the form of the flower glass the better, and plain glass is best of all, because of the reflected lights and shadows which the flower-stems afford in clear water. Large pottery jars of excellent form can now be procured at little cost, and these may be decorated at home with some Greek tracery or other design in black, or they can be painted black and the design left in the original colour of the jar by stencilling. These jars with a vessel full of water placed inside are admirable where a large display of flowers is desired, as they allow scope for length of branches. It is not, of course, everyone who can find flowers just suited for these large jars, but those who possess old gardens will generally have wherewith to compose beautiful floral pictures. Nothing I have found more lovely in them than branches of Apple blossom cut some 4 feet or 5 feet long, and it will not really harm an old Apple tree now and again to thin out of it a long flowering spray. If we have not Apple trees, branches of the Black Thorn with their white blossoms can perhaps be cut from a country hedgerow or wild bank in some springtide ramble. While yet earlier in the season, branches of the Willow can be found with silvery catkins so lovely, that no painter's brush can ever tell their story.

There is no doubt much of "fashion" in the decorative use of flowers, but we must ever remember that above all fashion reign in immutable calm, the everlasting laws of colour, of harmony, and of form, and if we will only think for ourselves, if we will only be fearless, and not have and do things because others have and do them, but instead choose and seek and do, because of beauty and of fitness, then our gardens and our houses will be a delight and interest to others as well as to ourselves, since they will express our own individuality, that *ego* with which we are all endowed, and that makes us distinctive from each of our fellow-beings, and which, as a divine gift, it should be our endeavour to develop to the utmost.

L. A. L.

(To be continued.)

## THE ROCK GARDEN.

### VI.

APRIL 23.—Copious rain after genial sunshine during the past week has stimulated the growth of all alpine plants, and rock gardens everywhere are donning their best spring garb. I have noticed a large number of rock plants expanding their blossoms during the past week not only here, but in various parts of this county (Devon). The time of blooming is a most important matter, especially for those selecting the material wherewith their rock gardens are to be embellished. We may furnish our rock gardens with many choice and rare plants, and yet we may not be successful in forming a pleasing picture, because flowers which are open at the same time are kept too far apart to form a harmonious combination. With the desire of assisting others, I will, therefore, mention the best of such rock plants as were and are blooming together during the past and the present week (third and fourth week in April) as far as such plants have come under my own observation. Most of the plants mentioned are growing here in Exeter, others at Barnstaple (North Devon),

and some at Newton Abbot and Torquay (South Devon).

### FIT COMPANIONS BLOOMING SIMULTANEOUSLY.

A SELECT CORNER.—*Androsace pyrenaica*, *A. Laggeri*, *A. carnea*, *A. Chumbyi*, *A. Chamaejasme*, *A. arachnoidea*, *A. villosa*. All these gems are now in bloom here and might well be grouped together in the rock garden. They certainly deserve a select corner to themselves, and mostly on a rock so raised as to be near the eye, for otherwise much of their charm would be lost. *Androsace pyrenaica*, for instance, is not a plant for distant effect, but requires the closest observation to be fully appreciated. The tiny white flowers are perhaps less than a quarter of an inch in diameter, and nestle on a compact cushion of diminutive leaves. It grows slowly, but is most desirable. I find it succeeds best in a sloping position and in very stony soil. *Androsace Laggeri* with its pretty pink flowers does best on the half shady side; its moss-like growth is very pretty even when not in bloom. The white-flowering *Androsace villosa* should be planted sideways in a vertical fissure on the sunny side. The rare *Androsace arachnoidea*, which is also now in bloom, requires a similar position. It resembles *A. villosa*, but has larger flowers and is more hairy than the former. *Androsace Chamaejasme*, which also has white flowers, does very well on less sloping ground if well surrounded by small broken stones. *Androsace Chumbyi* requires a sunny position, where it can grow downwards and hang over the stones. It resembles *A. sarmentosa*, but is of slower growth and its flowers are a deep rosy purple instead of pale mauve. It is also earlier in bloom than *A. sarmentosa*, which latter is scarcely showing its buds as yet. *Androsace carnea* I mentioned in my notes of last week, but it is still looking gay with its pink blossoms, and might well be associated with the other kinds just mentioned.

PRIMULAS are blooming abundantly this week. In North Devon I noticed the rosy purple *Primula viscosa* doing well in a sloping position on a half shady rock; also the pure white *P. nivalis* and the bright crimson *P. rosea*. The latter looks most effective in masses, and should always be planted in very moist ground fully exposed to the sun. *Primula platy petala* is a double and very bright purple form of *P. acaulis*. It has here for several years past occupied a shady position, and flowers well every year. *Primula farinosa* (also now in bloom) prefers a moist and sunny position. Other *Primulas* flowering this week in a half-shady position are the bright golden yellow *Primula Auricula*, the purple *P. marginata*, *P. calycina*, with rosy purple flowers, and *P. integrifolia*, which with its glossy leaves and bright purple blossoms is very striking. *Primula Sieboldi* does well here; it was planted in a shady position some two years ago, but seeded itself on the sunny side of the rock, where a fine batch is now in full bloom, while the plants on the shady side are less advanced.

SAXIFRAGES.—The earliest kinds, such as *Saxifraga oppositifolia*, *S. apiculata*, and *S. sancta*, are now past; but that little gem *S. Boydii* is still in bloom. One of the choicest kinds which has opened this week is the true form of *Saxifraga luteo-viridis* (Schott. et Kot.), with its deep yellow corolla almost enclosed in a greenish cup-like calyx. This should be planted sideways into an upright fissure exposed to the sun. *Saxifraga Rochelliana*, with its small silvery rosettes and corymbs of white flowers, is now at its best, and deserves a good place. Two very neat plants of the mossy sec-

tion are also in bloom, viz., the delicate pink *S. Rhei* and the deeper coloured *S. atropurpurea*. Larger kinds with white flowers now blooming on a sunny slope are *S. muscoides* and *S. aromatica*.

SHADE-LOVING PLANTS NOW IN BLOOM.

Dog's-tooth Violets with their rosy flowers and large spotted leaves are a special attraction. In a rock garden in a southern part of this county I noticed a particularly fine form called Alexander von Humboldt with bright pink flowers larger than usual. In the rougher portion and beneath the shade of trees the bright yellow *Epimedium pinnatum* and the pink *Epimedium roseum* are looking well. Anemones of the *A. nemorosa* type are also in bloom, most conspicuous amongst them being the charming blue *Anemone Robinsoniana*. Delightful plants now blooming at Exeter in a prominent but shady position are *Rhodothamnus Chamæcistus*, scarcely 3 inches high, with trusses of large pink flowers, and the American *Houstonia serpyllifolia*, with deep blue flowers, very distinct and far superior to the paler blue *Houstonia cœrulea*. The white form (*Houstonia cœrulea alba*) is also now in bloom. The *Houstonias* require a moist, spongy soil, and succeed well in the shade of a rock.

A SUNNY CORNER.

*Draba aizoides* and *D. Aizoon* are past, but the distinct and pretty *Draba brunneifolia* is still in bloom; it forms a mossy carpet which sets off the bright golden yellow flowers to great advantage. *Gentiana Clusii* has opened its large deep blue flowers, and *Gentiana verna*, in a rather dry, sunny position, is nearly past, but in a moister place on the same rockwork the buds look stronger and are only just beginning to open. *Euphorbia capitata* has its bright yellow flowers fully expanded, and is doing well in a sloping position. A similar place has been assigned to *Veronica telephifolia*, which with its pale blue flowers and glaucous foliage is very charming. *Cerastium lanatum villosum* is a very different thing from the common *C. tomentosum*; it grows but slowly and loves a dry position, where its white flowers are now fully expanded. A very handsome plant blooming on an exposed, but level spot is *Romanzoffia sitchensis*; the orbicular deeply-lobed leaves have an almost wax-like appearance, and the white flowers look very attractive. *Ranunculus montanus* is a somewhat larger plant, which does well in ordinary soil at the foot of a rock; it grows about 6 inches high and has large deep yellow flowers.

CARPETING PLANTS IN BLOOM.

The following plants now flowering are too well known to need any further comment. They are best adapted for the rougher part of the rock garden, where by their somewhat rapid growth they could not endanger the smaller and choicer kinds. *Arabis alba*, *A. lucida*, *Aubrietias*, *Schivereckia podolica* (white), *Hutchinsia alpina* (white), *Alyssum saxatile*, *Cardamine trifoliata* (white), and the deep blue *Lithospermum prostratum* are now all in bloom. The last has, unfortunately, suffered severely in most places during the past winter.

MEDIUM-SIZED PLANTS NOW BLOOMING.

The following might well be introduced in prominent places between and at some distance from the rocks reserved for the smaller and choicer kinds: *Dielytra eximia*, *Arnebia echioides*, the well-known Prophet's Flower, *Waldsteinia trifoliata*, *W. fragarioides*, *Caltha palus-*

*tris flore-pleno* (the double Marsh Marigold), *Corydalis ochroleuca*, and *Gemma aureum*. With the exception of *Dielytra* all these are yellow, and in arranging them care should be taken to introduce them between groups of plants whose colours would blend harmoniously.

Exeter.

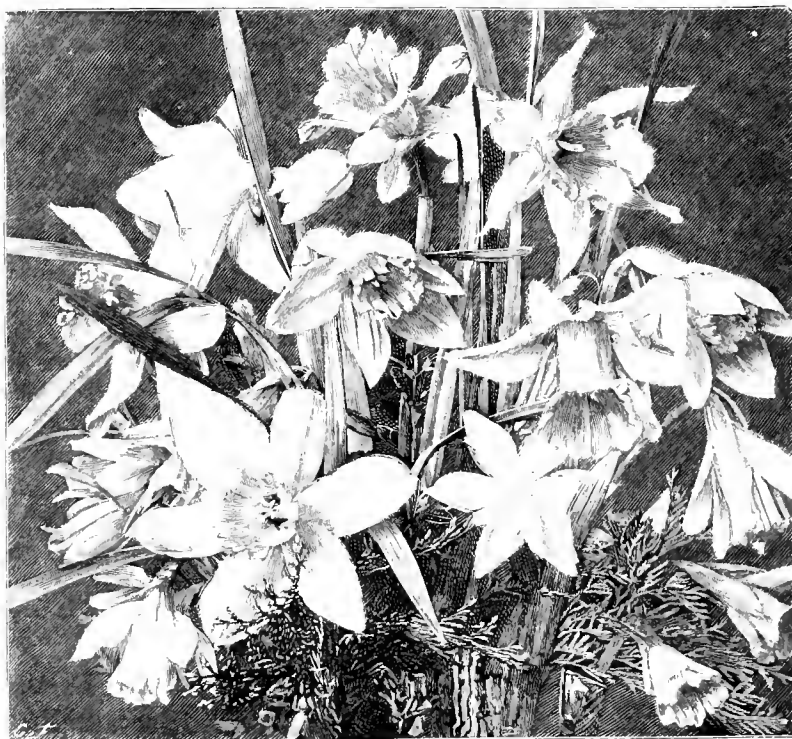
F. W. MEYER.

(To be continued.)

DAFFODILS AS CUT FLOWERS.

As in the case of other flowers, when there happens to be a profusion of bloom there is in that of the Daffodil also the same danger of overcrowding taking place. Surely no better example of the beautiful is needed than is provided in the natural growth of these pleasing spring flowers, the foliage, in combination with the blossoms, affording an example of what to adopt when arranging the cut blooms. When growing and in flower the foliage and the

blossoms still upon the plant; but invariably the colour is slightly better unless shading is adopted, as in the case of the florist's Tulip. Regarding the use of the foliage, it may be urged that to cut it largely would weaken the bulbs, but it may be taken a leaf here and a leaf there, so as not to make any perceptible difference; or where a good stock of the common Daffodil exists, its foliage can be taken in preference. To mix the different types is not so desirable as that of keeping them separate, nor is it in good taste to mix the single with the double varieties. For instance, *poeticus ornatus*, although so beautiful by itself, is quite out of place with the common Daffodil, or with such as *Emperor* and *Empress*. Use these two latter kinds, however, in combination, and a charming effect is produced. At least four divisions can be made in this direction, each being kept to itself—viz., those with large trumpets, as *Emperor* and *Horsfieldi*; those with medium trumpets, as the *Barri*, *Leedsi* and *incomparabilis* forms;



Daffodils in a vase.

blossom seem to be, as they really are, quite indispensable the one to the other. Let this be imitated, then, as nearly as possible when disposing of the cut blooms, and afterwards, if need be, compare the natural style with the opposite or unnatural by massing the flowers something in the same manner as they are sent to market in bunches, with which it is a rare occurrence for any foliage to be included, much as it is needed. Each flower should be so displayed as not to crowd upon that next to it; it is only in this way that the best possible effect can be had. Oftentimes when cutting Daffodils from home-grown plants there is a danger of two mistakes being made; the one is that of gathering too many sorts at once, and the other that of taking flowers which have been expanded for some time. It is not perhaps generally known that many who exhibit Daffodils in large numbers cut them before they are really fully expanded. Afterwards they continue to develop, but may not possibly reach quite to the size of

those with small trumpets, as the *Burbidgei* and *poeticus* types; and those with small flowers, as *cyclamineus*, the *Hoop-petticoat* *Narcissus* and the *Jonquils*. H. G.

**Forsythia suspensa.**—As a plant for covering walls or for similar purposes this *Forsythia* is well known, but as a bush in the open ground the most generally grown species is *viridissima*, which is, however, not so showy as its more rambling-growing relative. Notwithstanding the fact that *F. suspensa* may be treated as a climber, it is also seen to very great advantage as an open bush, as it forms a pleasing specimen of loose, irregular outline, and the strong arching shoots, which are pushed up so freely, are just now wreathed with beautiful golden blossoms. An isolated specimen will when in a flourishing condition quickly establish quite a colony around it, for not only are suckers pushed up freely, but when the tips of the long shoots come into contact with the earth they soon root, after the manner of a Bramble, and quickly form a good-sized plant.



*F. suspensa* is certainly one of the very finest of all early-flowering shrubs. The late excessively severe winter does not seem to have affected it in any way.—T.

**Prunus divaricata.**—Each recurring season a fine tree of this species is very beautiful at Kew, yet despite its undoubted merit as a lawn tree it is very seldom met with and may be sought for in vain in most nurseries. It forms a very handsome tree with a rather wide-spreading, freely-branched head, and early in the spring when every twig is laden with white blossoms it stands out very conspicuous. *Prunus divaricata* is a native of the Caucasus, and, according to Loudon, was introduced in 1820.—T.

## ORCHARD AND FRUIT GARDEN.

### PEAR WILLIAMS' BON CHRETIEN.

No Pear is better known than this, as it succeeds admirably in many forms of tree, and is not so capricious as to soil and situation as some other sorts, though naturally it is better from favourable aspects and other conditions in its favour. Grand fruits are produced on cordon and wall trees, but, according to my experience, the best flavoured fruit is obtained from bush or pyramid trees, where they will succeed. No doubt the free circulation of air and greater amount of light are the causes of this superior quality; not only so, but the fruit from these trees always keeps longer without decaying at the centre than the larger and more imposing Pears from wall trees. In spite of its early decay I think the variety will always hold its position for private use, as its rich flavour and pleasant perfume will always make it a favourite. Whether it will be as popular a market Pear in the future as in the past is doubtful. Low prices arising from the increased production and glutted markets, uncertain cropping, and the introduction of handsome varieties that surpass it in appearance, are more prolific, and not so liable to blemishes or black spots on the skin as Williams' Bon Chrétien, will cause growers to be very careful about planting more of the variety. I am sorry to see Clapp's Favourite ousting Williams' in many places, as the quality is a long way behind that of the old favourite, and those growers who have made the change claim that Clapp's is not so subject to fungoid and insect attacks. When disfigured fruit and foliage are attributed entirely to those two causes, I think the cultivator should also bear some of the blame, as there are now so many well-proved remedies for such evils that it is certainly some fault on the grower's part if he allows the enemies to practically spoil the crop and foliage, thereby injuring future prospects. I believe the argument that Williams' is more prone to the pests attacking Pears than other varieties will not stand good, as it has never shown any such tendencies with me amongst over a thousand trees in great variety. All the Pear trees are washed alike with an insecticide, which also acts on any fungus, and I would here urge on all who may be using Paris green or other strong remedies to never spray their trees while in bloom, otherwise injury will follow; but immediately the fruit is set it will be safe to spray again. W. G. C.

**Apple Pine-apple Russet.**—I have here one tree of this Apple. It was formerly a bush, but not being able to get any fruit from it, I allowed

it to grow away at will, hardly pruning it at all. One season it made shoots 5 feet long, and I allowed these to remain almost their whole length. For the last ten years I have had fruit every season, but never a heavy crop. There is something about the flavour of this Apple that is most peculiar, yet pleasing, and which most persons who have tasted it appear to like. It is an Apple that I should not care to recommend now that there is such a number of more certain sorts.—E. M.

**Strawberry Noble for forcing.**—By several persons in this neighbourhood, one especially, this Strawberry is thought highly of for forcing. Not only does the fruit set freely, but it grows to a large size and takes on a rich colour. A person of my acquaintance grows a good number of plants, and with good results, I should say, when we consider the price paid per lb. for the fruit—4s. 6d., and for specially selected 5s. The demand is much greater than the supply, even at this price. He commences forcing the plants early in January, and has the fruit ripe by the middle of March. By the same time in April a quantity has been gathered at prices that cannot fail to be remunerative. Instead of layering the runners into pots in the usual way, he layers them in the open ground between the rows of plants, and when they are well established lifts them carefully into the fruiting pots. Thus the labour entailed in watering, as in the case of pots of any size, while the runners are becoming established is saved. Capital plants are evidently obtained, judging from the produce.—E. M.

**Apricots.**—Apricots, I find, are setting freely and promise an abundant crop, but trees on exposed borders will soon require liquid food and early thinning. Many growers, myself included, often fail to thin Apricots when set, leaving them to a later stage, when they have robbed the trees of much energy and are of little value. I have seen it stated that these fruits in a green state are much valued in the kitchen for tarts, but if left too long they are of little value, and it is well to thin early for the sake of the later fruits and to throw all the vigour into the crop. When the trees are well cared for there need be little anxiety as to stoning. A limited number of fruits has a better chance than crowded ones. We get much finer fruit, have less trouble with insect pests, and there is less canker when the trees are well fed and thinning and stopping of the shoots are practised early.—W.

### RASPBERRIES.

It is worthy of note how the different varieties of these have withstood the late winter. On looking over the rows I find that some of the kinds are nearly killed to the ground, while others have scarcely suffered at all. How to account for this was not difficult when we take all things into consideration, but to those who have not hitherto tried the different modes side by side it may be of interest. Last season Superlative made fine strong canes about 8 feet high, and the buds are quite plump from bottom to top. The plants, standing singly about a foot apart, are trained to wires strained across the plot. The rows are 12 feet apart, so that the light and air are able to penetrate both sides of the rows to thoroughly ripen the canes. A row of Prince of Wales growing close by and treated similarly has also withstood the winter well, while several rows planted in clumps, having four or five canes tied to each stake are nearly all killed to the ground. Several rows of Fastolf, Carter's Prolific, Red Antwerp, and some others treated in this way have also suffered, while those of the same kinds planted in single rows and trained to wires do not seem to have suffered in the least. From this it is evident that the canes grown in clumps were not so well ripened as those in the single rows, which had only a space of 6 feet between them. On our soil Raspberry canes grow very strong, many of the more robust kinds reaching from 10 feet to 12 feet in length. These are cut back in spring to 6 feet or

7 feet. During ordinary winters these have withstood the frost and have produced very fine crops of fruit the following season; sometimes, however, they have failed, but I have never noticed it to the same extent as this season. Would it not be better on such ground to plant in single rows and allow a greater distance between them? I have usually gathered more fruit from a row of canes planted in clumps 4 feet apart than from those on the single cane system, but sometimes after a severe winter those grown by the former mode have suffered considerably; therefore, taking all things into consideration, I think the latter plan would be most profitable, as the canes would be more thoroughly matured, and therefore not so liable to get injured during severe winters. That soils and situations have a great influence on the hardiness of plants there can be but little doubt, and those gardens situated in low, wet places where the ground is heavy suffer much more from the effects of frost than others on higher elevations. As an instance of this, recently our thermometer fell to 27° Fahr., while at an elevation of 600 feet four miles away 35° was the lowest recorded, thus showing that though plants may be perfectly hardy on the high ground they will not stand in low, wet places where the soil is retentive.

H. C. PRINSEP.

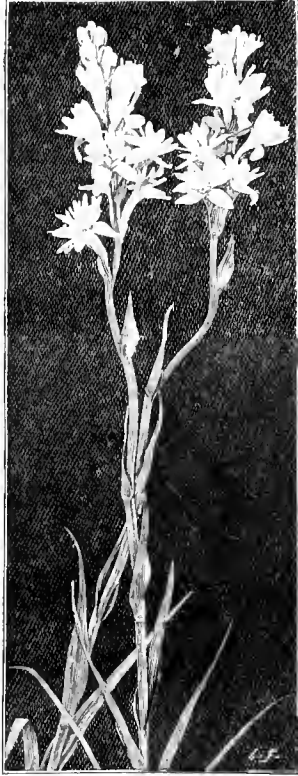
**The Apple blossom weevil.**—At page 285 Mr. S. T. Wright refers to this terrible pest as being numerous in some districts this season. As a rule we suffer very much from its ravages in this neighbourhood, but I am happy to say that the bloom petals seem to be growing out of its reach. If the spring is tolerably forward the insects are not hatched until the flower trusses are well advanced; consequently the crop is saved; but in backward seasons I have seen well furnished trees divested of every bloom in a short time. The pest, moreover, seems more partial to some varieties than others. Cox's Orange Pippin and Cox's Pomona being special favourites. I think the bloom on small trees can be saved by sprinkling them over on dewy mornings with wood ashes.—J. C.

**Madresfield Court and Gros Colman Grapes.**—The experience of your correspondent, R. Katzer (p. 287), in regard to the cracking of Madresfield Court differs somewhat from my own, inasmuch as with him this malady, while affecting his bunches in the early house, was absent altogether from those in a later house. I have a Vine inarched on to the Muscat of Alexandria stock. This is usually started about the end of November, the fruit ripening early in June. I allow a good deal of atmospheric moisture with air on even until the berries are nearly finished, and yet they never crack. The Vine in a later house, started in February, and which is inarched on the Black Alicante, troubles me somewhat, not by the ordinary cracking, but by the skin giving way where the berries wedge each other. For this reason I now always thin the bunches very freely to avoid pressure. A grower for market once told me that he was at one time much troubled with cracking in this Grape, and that preserving a dry atmosphere did not cure it. At last he took to supplying the roots with double the ordinary quantity of water, when the cracking entirely ceased. I myself think that to withhold root moisture just when the berries are colouring is a great mistake. It is then that the border, if inside, wants a good soaking to enable the berries to swell to their normal size and to lay on a good bloom. In regard to Madresfield Court requiring less heat than the Hamburg, I should be very sorry to plant it in a house with Hamburg that came on without the aid of fire heat. My experience is that it will stand and even enjoy as much heat as Muscat of Alexandria. R. Katzer asks if Gros Colman inarched on to Black Alicante or Muscat would ripen properly in a late house. My answer is, yes. In the case of the splendid Gros Colman grown at Kelham Hall and always ripe in September the Vines are not started until March. These are grafted on the Muscat.—J. CRAWFORD.

## STOVE AND GREENHOUSE.

## THE TUBEROSE.

THIS old inmate of our gardens came originally from Mexico, having been introduced as long back as 1629. Its culture, however, in large quantities for the trade and private uses has only been taken up in the present extensive



*The African Tuberose.*

manner within the past ten or fifteen years. The demand probably never has at any time been greater than it is now. It does not require any great effort of memory to recall the time when the only term given was that of the Italian Tuberose, not from the fact of its being a native of Italy, but by reason of its there finding a congenial home. Since then, and only in recent years, the culture of this flower for exportation has extended to South Africa and to America. On the former continent it is largely grown in the Natal district, where many acres are annually planted. On the latter continent it is largely grown in the Southern States, whilst the West Indian Islands supply their quota also. The variety known as the Pearl is of dwarfer habit, more, I presume, from the treatment accorded or from the climate where it is grown than from any really distinct and fixed characteristic of its own. Without knowing the exact surroundings whereby this is brought about, it may be fairly assumed that it is the climatic influence which causes it during the ripening process of the growth.

By purchasing bulbs grown in the several districts named, it is now possible to greatly extend the season of supply. For instance, the Cape bulbs are ready in September, whereas the American supply is not available until December; by retarding the latter and hastening the former a supply may be kept up under other favourable conditions the year round. When forcing has to be done, bottom-heat is a decided

boon, as in the case of the Lily of the Valley, but later batches do not really stand in need of it. The latest of the American bulbs can be successfully grown by planting them outside on warm borders. These, if planted during May and early in June, can afterwards be lifted and flowered in the late autumn in warmth. Another plan is to plunge them over the rims of the pots where the soil outside is too heavy or too cold. Loam is oftentimes recommended as the soil in which to pot them, but half and half of loam and peat (or leaf-soil if peat be scarce) will give more satisfactory results. No manure is needed in the soil, otherwise it will tend to produce a super-abundant leaf growth, but manure water will, if given after the spikes are fairly started, greatly assist the bulbs in developing the flowers. In private gardens the one great trouble oftentimes is that of red spider, to which the Tuberose seems to be predisposed. This can be kept in check best by frequent syringings, using water impregnated with the properties of soot, but in a clear (or nearly so) state. A moist atmosphere will, of course, be far better as a preventive. In any case it is best to avoid growing the plants in vineries, Peach houses, &c., for this reason. The Tuberose makes one of the prettiest button-hole bouquets imaginable, a good background for two or three flowers and a bud being a spray of the Box-leaved Myrtle. The double is by far the most popular form, but the single is not by any means to be despised, particularly when the flowers are just expanded. The mistake often made is that of giving water too freely before the growths have advanced sufficiently for the pots to be fairly well filled with roots. When the pots are well filled with roots and the spikes pushing up, then manure water may be freely given, that from the farmyard being preferable. Where many suckers appear around the crown growth, it is a good plan to thin them out, otherwise the flower-spike will be weakened. Personally, I have had a preference for growing the Tuberose in the long pots, oftentimes termed Hyacinth pots: these take less room and are quite large enough.

SOUTHROX.

**Anthurium Andreanum album.**—A white-flowered *A. Andreanum* has been referred to more than once, but the flowers that have come under my observation were small and of a pinkish tinge. I recently saw a white-flowered variety with a spathe equal in size to that of an ordinary *A. Andreanum*. The contrast between this *Anthurium* and the brilliant spathes of the others is most marked, and it will doubtless in time be very generally grown. The spathe of this variety is less corrugated than that of the type. Apart from their quaint and showy blossoms, the foliage of this class of *Anthuriums* is decidedly ornamental. The flowers, too, remain fresh for a long time, this being another great point in favour of these Aroids.—H. P.

**Richardia Pentlandi.**—On April 24 some 300 tubers, announced as the "new yellow Arum Lily *Pentlandi*," were offered for sale, and they attracted a sufficient amount of atten-

tion to show that these golden flowered *Callas* are decided favourites at the present time. Single tubers realised from 26s. to 35s. each, while smaller ones sold in pairs fetched 30s. the two. Others were disposed of in fours at about 13s. each. If this consignment turns out to be correctly named we shall soon see this *Calla* more generally grown. In connection with the prices above quoted it may be interesting to recall those realised by *R. Elliottiana* when sold at the same place on June 17, 1892. The highest price for one plant of this was 17 guineas, and the lowest about 14s., but these last were very small. The plants of *R. Elliottiana* were all in a growing state, hence no doubt existed as to their correct name, but those of *R. Pentlandi* sold the other day were quite dormant, and in that state could not be distinguished from others, especially *R. hastata*. On December 14, 1892, a quantity of tubers was disposed of at prices varying from 12s. to 15s. each as *Calla Pride of the Congo*, and announced as a "new golden flowered *Calla* from Africa," but on flowering they (or at all events all that came under my observation) turned out to be *R. hastata*. It is to be hoped that those sold the other day as *R. Pentlandi* will prove to be correct.—H. P.

## SNAKES-HEAD FRITILLARY.

A good garden plant that comes straight from our English meadows is *Fritillaria Meleagris*. In some districts both the purple and the beautiful white variety abound. For simple beauty it holds its own against any of the numerous garden *Fritillaries* of low stature. The curious chequering of the flower is very interesting when observed closely. It is not affected by colouring only, as it is nearly equally perceptible in the pure white. These pretty plants like a cool soil that is never dried up, if among Grass so much the better, water meadows being their



*The Snake's-head (Fritillaria Meleagris) as a pot plant.*

natural home. The illustration shows the beauty of the bulb in a pot, a purpose for which it is well adapted. The bulbs must be potted up in the autumn and in ordinary soil. They will grow freely in a greenhouse.

**Fuchsia Princess May.**—A great many of the new *Fuchsias* sent out within the last few years have been principally remarkable for the size of their flowers, for, in common with many

other subjects, the production of huge blooms seems to be the one object aimed at by the raisers. This, however, cannot be said of the variety Princess May, which is a pretty and remarkably free-flowering Fuchsia even in a small state. This is one of the light-coloured Fuchsias, the tube and sepals being white, with a slight blush tint, while the single corolla is of a pleasing shade of rosy coral. It is of a dwarf, freely-branched habit, just the style of plant that is popular with our market growers, and I hear that some of them think highly of it. This variety does not grow so freely as some, but during its earlier stages it responds readily to a little more heat than most of them need. Princess May was raised by Mr. Banks, who many years ago was well known as a raiser of new Fuchsias.—H. P.

### THE MARKET GARDEN.\*

#### FIELD CULTURE OF VEGETABLES.

THE ways and means which at the present day are open to the cultivator who desires to increase the number and variety of his crops are more numerous and varied than ever, but, at the same time, the number of the crops that will certainly pay has become more and more limited. This is so because the increasing competition of foreign countries is more widely felt, while in the interior districts the constant increase of imposts and charges of all kinds bears more and more heavily upon the expenses of production.

This foreign competition, however, does not extend in the same degree to all the products of agriculture, but the kinds which suffer most from it are those which, from their good keeping properties and their immunity from injury in transit, can be easily sent to our markets from distant foreign countries.

The products which, in a great measure, are free from foreign competition are those which, requiring to be consumed while fresh, cannot bear long journeys without having their selling price considerably diminished thereby, and to this class belong fruits and fresh vegetables. Accordingly, I have thought that it would be highly advantageous to cultivators if someone pointed out to them certain fruits and vegetables which might be admitted into the general plan of farm culture, and which, if properly attended to, would yield a profit not to be despised.

With regard to fruits and fruit trees, that part of the question has been already disposed of, as one of your fellow-townsmen, Mons. Charles Baltet, has supplied instructions and advice of the greatest importance on this subject, and I shall now confine myself to an account of the vegetables which may be profitably introduced into field culture, especially in the proximity of large centres of population, and more particularly of the industrial classes, where there would be a considerable demand for fresh vegetables.

In the first place, it is necessary to make a distinction between those kinds of vegetables which can be almost certainly grown successfully without any artificial watering and those kinds which, on the other hand, almost indisputably require to have a considerable quantity of water supplied to them by means of infiltration, irrigation, or any other method. The language of every-day life, which is always picturesque and logical in its expressions and derivations, has given the name of "culture maraichère" (that is, "cultivation in the marais" or marshes) to that department of cultivation which aims chiefly at the production of fresh vegetables on a large scale and by speedy methods. The earliest specialist cultivators

had in fact recognised the necessity of supplying many kinds of vegetables with a far greater quantity of water than is afforded them by an occasional fall of rain. Hence the establishment of the first market gardens in low-lying, sometimes marshy, parts of Grass lands, where the soil was always moist from its proximity to the underground water, which being always not far from the surface could without any great labour also be utilised for artificial watering. It is for this reason that the culture of vegetables in the neighbourhood of towns is chiefly confined to the valleys and the low-lying, moist parts of the adjacent plains. One of the most interesting examples of this kind of culture is furnished by the "hortillons" (or market gardeners) of Amiens, who raise their crops on the dry-land portions of ancient peat bogs which are traversed by innumerable canals serving for the transport of both products and manure—a veritable Venice of market gardens.

But, although most kinds of vegetables are benefited by being abundantly supplied with water, there are some kinds which, in ordinary seasons, are satisfied with the rain that falls during summer in our climate, and on this distinction is based the agricultural prosperity of many localities around Paris, where without artificial watering and under much the same conditions as those of careful field culture a large proportion of the vegetables which supply the markets of Paris is raised. Around nearly the whole of Paris extends a zone varying in width from eight to twenty-four miles in which the farmers devote sometimes a very considerable proportion of their land to the production of vegetables which they usually bring to the city market themselves with their own carts and horses, so that the limit of these cultivators is mostly fixed by the distance to which a horse can go and return in a night and half a day.

In the neighbourhood of Verrières, for example (which I know particularly well from having spent about half of every year there all my life), eight miles from Paris, about one-fourth of the soil is devoted to the culture of crops for the Paris markets. There one may see numerous orchards of low-trained fruit trees and plantations of Currants and Gooseberries, not to speak of very many choice kinds of Cherries and Plums. All these, however, come into the list of the subjects of which Mons. Charles Baltet has treated so well. But amongst these plantations, or under the trees, large areas of ground are covered with Strawberries, dwarf Peas, and even Violets. In the most open parts Asparagus and early Potatoes are grown for the first spring crops, also Haricot Beans for cooking green, early tall-growing Peas, Gherkins, Spinach, Sorrel, Brussels Sprouts, and, for some time past, even Cauliflowers and Tomatoes. All these are grown without any artificial watering, and I think they form a pretty exact list of the vegetables which can be recommended for field culture in localities where the climate is similar to that of Paris.

In this discourse, therefore, I shall more particularly treat of the culture of Asparagus, Gherkins, Spinach, Haricot Beans, Peas and Potatoes, not forgetting, however, those other kinds of vegetables which, being more exacting in the matter of moisture, may find in valley lands a position favourable to their growth, viz., Artichokes, Cardoons, Celery, various salad plants and most of the kitchen garden roots. In short, I shall divide this culture of vegetables on a large scale into two sections: (1) the culture of the more hardy kinds in plains and upland districts, and (2) the culture in valleys of those kinds which require a more abundant supply of moisture.

This division, I admit, cannot always be strictly maintained, as it is liable to be influenced by many local peculiarities: but it is founded, as I believe, on a sound basis, namely, the difference or distinction that must be made between ground which receives only the rain water that falls upon it, and other ground, such as that in valleys, which receives, through infiltration, a portion of the rain water that falls upon the higher ground.

As it would take several hours to exhaust this subject even in its simplest aspect, and as the time at my disposal is limited, my observations will bear chiefly upon the selection of the most suitable varieties of each kind of vegetable for field culture, together with a description of their distinctive characteristics. The more indeed the adaptabilities of plants are specialised, the more important to the success of the planting is the selection of a variety which is well adapted for the object which one has in view.

(1) *The hardiest kinds of vegetables which, not requiring any artificial watering, are most suitable for cultivation in ordinary flat or upland districts.*

#### ASPARAGUS.

The field culture of Asparagus is one of the most interesting innovations of the present age, and one which has been attended with the most striking success. At almost all times a few rows of Asparagus plants have been interspersed amongst other crops, and notably amongst Vines. It was in this way that the culture of Asparagus commenced at Argenteuil, but owing to the proximity of Paris and the enterprising spirit of the cultivators, that which at first was a mere accessory very soon became the chief object of attention, and the profit which the people of Argenteuil now derive from their crops of Asparagus undoubtedly exceeds that which they obtain from their vineyards. There is no other crop, perhaps, which yields so large a return for the care bestowed upon it as Asparagus. One might say that, as is the case with diamonds, the value of Asparagus increases in proportion to the square of the size of the plants, so that a bundle of it which has cost twice as much to produce it as another bundle has will readily sell for four times the price of the latter.

In plains or flat districts any kind of good soil, provided it is well drained, is suitable for the cultivation of Asparagus; at the same time there is a great advantage in selecting ground that is mellow, light and easily worked, as with soil of this kind the numerous operations connected with the maintenance, earthing-up, manuring and cutting of the crop are much less expensive, and are done in a better and more satisfactory manner.

There are numerous instances of plantations of Asparagus which are 25 acres or even 50 acres in extent, and are cultivated entirely with the plough, with the exception of the manual labour which is always required in the operations of earthing up the plants and gathering the crop. Manure should be liberally supplied. The heads of the Asparagus grown at Argenteuil are indebted for their size and fine appearance to plentiful applications of the night soil which is carted from Paris. A small quantity of sea salt, of which a special preparation is sold for agricultural purposes, is a useful addition to the manure.

With respect to the best varieties, the preference should be given to the Argenteuil early and late kinds (Asperge hâtive and A. tardive d'Argenteuil). These two kinds should be grown in every plantation in the proportion of three-fourths of the early variety to one-fourth

\* Address delivered by Mons. Henri de Vilmorin at the Congrès Agricole de Troyes, June 4, 1892.

of the late. The difference between them is not so much with respect to the time at which the shoots become fit for cutting as that the late variety continues to produce very fine heads for a much longer period than the early kind, which in the beginning of the season yields very fine heads, but these soon decrease very much in size, although abundantly produced. It is then that the late kind comes in, happily, with its good-sized heads, which are all the more valuable from their comparative rareness at that season. These large-sized heads are used either for setting off bundles of small-sized Asparagus or are made by themselves into choice bundles, which at the end of the season command almost as high prices as they did at the beginning.

Amongst the general considerations which are favourable to the field culture of Asparagus may be reckoned (1) the increasing demand for this vegetable, which keeps up the market price of it, notwithstanding its more extensive cultivation; (2) the great length of time which plantations of Asparagus will last when they are once well established; (3) the possibility of rendering the plantations exceptionally productive by setting the plants well apart from one another, so that they may produce heads of increased size by the careful preparation of the ground and by a judicious use of manures; (4) the comparatively high value of the produce, which insures the cultivator against any risk of loss in sending it, even great distances, to markets where the local Asparagus crop has not yet come in or where the supply has ceased.

#### BORECOLE AND BRUSSELS SPROUTS.

Many varieties of hearting or solid-headed Cabbages may be grown in fields in ordinary soil and without any artificial watering, but crops of these kinds of Cabbage are always more or less precarious, the occurrence of unusually hot and dry weather in spring being very detrimental to their growth. Of this class, therefore, I can only recommend with confidence—for field culture in ordinary flat districts—the autumn kinds which do not form heads until the beginning of winter, and even then sometimes do so rather imperfectly. The best of these is the Chou de Vaugirard, which is so highly esteemed in the neighbourhood of Paris, and the Chou de Milan court hâtif, which, when sown in June or July and planted out when the autumn showers begin to fall, yields throughout the winter broad rosettes of very early and very tender leaves surrounding a heart which is generally about the size of two fists at the most.

The small Chou frisé de Limay, which is almost the same variety as the last-mentioned, but bearing the head on a tall instead of a very dwarf stem, is also suitable for field culture. These three kinds possess the double advantage of thoroughly withstanding frosty weather and of continuing fit for use for a long time, so that the grower can wait, without any risk of loss, for market days when the price will be a paying one, and also for such times as will bring weather favourable for cutting the crop and sending it to market. Forming imperfect heads, these varieties bring us, by a very natural transition, to the Borecoles, which do not form any head at all and which are not much grown in France, notwithstanding their great utility as a winter vegetable. Fully a dozen varieties of Borecole are grown in England and in Germany, but in France we grow hardly any except the green and purple curled kinds, tall and dwarf. The Borecoles are perfectly hardy plants, having withstood the frosts of the terrible winters of 1879 and 1890 uninjured, and produce leaves which are very palatable and even delicate in

flavour, especially after frost has acted upon them. Besides these common and very hardy kinds, the Chou frisé de Mosbach, the variety known as Bricoli at the Halle market in Paris, and the common and curled varieties of the Couve Tronchuda, or Portugal Cabbage, are also very suitable for field culture.

The same can be said of the Brussels Sprouts, which do not commence to bear until October or November, and which, having been planted out when the spring-sown plants are strong enough, will yield a plentiful succession of sprouts all through the winter. This vegetable is coming more and more into request in our markets, and the following three varieties are those which are most in favour at Paris:—

1. CHOU DE BRUXELLES GRAND, a very productive kind, bearing a great number of sprouts about the size of a large Hazel nut.

2. CHOU DE BRUXELLES NAIN, a dwarf-growing and more thick-set kind, bearing much larger sprouts (as large as a Walnut). Large-sized Brussels Sprouts are thought much of in England and are admired at exhibitions, but are inferior to the small-sized kinds in delicacy of flavour.

3. CHOU DE BRUXELLES MOYEN DE LA HALLE is the acme of production achieved by the cultivators who supply Paris. The plants of this variety are very regular in growth, and are characterised by the purplish tint of the leaf-stalks. The sprouts are round, nearly spherical in shape, well formed, furnishing the stem regularly, and are produced in succession for three or four months. The variety is also hardy and quite suitable for field culture. In gathering all kinds of Brussels Sprouts a good deal of hand labour is required.

(To be continued.)

### NOTES OF THE WEEK.

*Incarvillea alpina* (?) has stood the winter unprotected in the open. At present there is some question as to how far this is synonymous with *I. Delavayi*, as this latter does not seem to have flowered in England.—W. THOMPSON, Ipswich.

*Spiræa Thunbergi* fl. pl.—Almost all good shrubs find a congenial home at Syon House, and in the rich soil grow and show themselves in their prettiest aspects. This one is delightful, tall, its slender shoots perfect wreaths of pure white double flowers.

*Trillium grandiflorum* in a moist nook of the rock garden at Kew is one of the finest things in flower in the present week. A large tuft has nearly forty fine flowers all open. Anyone with a place likely to suit this the finest of all the Wood Lilies should try and grow it.

*Iris cæspitosa* is a pretty kind now in bloom. It has thick tufts of narrow, grassy leaves, and out of flower might be taken for a strong plant of the Cock's-foot Grass. Its flowers, which are freely borne, are of a deep violet-blue colour and carried on short stems which do not rise above the leaves.

*Phlox canadensis*.—The alpine Phloxes are among the brightest of spring flowers for the rock garden, and make fine sheets of colour. This species now flowering at Kew is most distinct and very pretty, the flowers in shape and disposition resembling those of *P. reptans*, but of a lovely pale blue shade.

The single Jew's Mallow.—The merits of this flowering shrub are not sufficiently recognised, but it has a distinct and graceful beauty of its own and is like a single yellow Rose in effect. A large group of it is quite the best thing among shrubs in the present week, the bushes being covered with flowers.

*Pyrus spectabilis* is a picture of soft pink on the mound at Kew, and in common with all its kindred is flowering with unusual freedom. We

trust these noble flowering trees may some day become more common in gardens. At present it is quite the exception to see them, and yet visitors to Kew pause to note the beauty of this and similar trees.

*Sairtpaulia ionantha*.—This pretty plant, of which a coloured plate was given in THE GARDEN for February 23 of this year, is well grown by Mr. Laing at Forest Hill, and when there recently we saw several healthy specimens in abundant bloom. The colour of its flowers is rich and effective, and doubtless the plant will soon become popular.

*Magnolia Soulangeana*.—This Magnolia is now flowering finely at Syon House, where both it and *M. conspicua* are well represented by large specimens. Its deep purple-stained flowers are rich in effect, and besides its distinctness of colour it is valuable, as it flowers from a week to ten days later than *M. conspicua*, thus prolonging the blooming season of these noble-flowering trees.

*Cytisus præcox*.—Groups of this pretty and early-flowering Broom are now very bright at Kew. It is a shrub of great beauty, strangely much neglected in gardens. Whilst many of the better-known Brooms, such as the white Portuguese and the yellow Spanish, are seriously crippled, this kind is flowering with its usual freedom, showing no traces of the severe cold.

*Ranunculus aconitifolius* is best known in its double-flowered form, but the type itself is well worth growing by those who have a moist place such as it wants. It luxuriates at Kew, with its roots perpetually moistened by the tiny stream that flows through the bog, and at the present time its leafy tufts are thickly studded with the single white flowers.

*Cœlogyne pandurata*.—I have a nice spike of this Orchid just opening. The spike is 2 feet 6 inches long and has thirteen blooms, each 5 inches in diameter. The sepals and petals are of a lovely soft shade of green, the lip jet-black and beautifully fringed. The spike has a bold, pleasing appearance.—F. KNIGHTS, Bitteswell Hall Gardens, Lutterworth, Leicestershire.

*Tulipa linifolia* and *T. montana* are two of the smaller species now in flower at Kew, but both bright and distinct. *T. linifolia* has long narrow grassy leaves, the flowers pale red externally, brighter scarlet inside, with a shining black base. *T. montana* has undulated leaves and a bright red flower with a regular zone of black, faintly margined with yellow at the base inside.

*Iris pumila*.—This is one of the dwarfiest of the Flag Irises, and a useful plant on light, free soils near the edge of beds and borders. It spreads about and quite early in spring becomes a sheet of flowers. There are several different coloured forms of it. One of the best which we noted recently at Long Ditton is Count Andrassy, with flowers of a deep blue shade, very freely produced.

*Polemonium humile* is a small, but pretty species, well worthy of the little care necessary to bring it safely through the winter. It perishes on cold or wet soils, but is hardy in those that are warm and well drained. We noticed it in flower the other day at Messrs. Laing and Sons, Forest Hill. Its leaves are much smaller than those of *P. œruleum*, but the flowers are large, pale blue, and borne on stems 6 inches to 8 inches high.

Strawberry Laxton's Leader.—Messrs. Laxton send us fruits of a fine new Strawberry named Leader, the result of a cross between Latest of All and Noble. The fruits are conical, in some cases wedge-shaped, the colour bright crimson, flesh scarlet throughout, and with a sharp, piquant flavour. It seems to be a variety that will travel well. The plants from which the fruits were gathered were only potted up at the end of September.

*Tulipa Haageri* and *T. Sprengeri* are two pretty Tulips now in flower at Kew. Though distinct from a garden point of view, *T. Sprengeri* will probably be classed only as a variety. *T. Haageri* has a neat flower of a distinct brick-red

shade externally, bright red inside, slightly stained with brown at the base, the anthers also brown. *T. Spr. ngeri* has longer and more pointed petals, is orange-red externally, light red inside, with the brown stain developed into a more pronounced blotch at the base of each petal.

**The Chinese Plum.**—I note your remark anent this Plum (*Prunus triloba*) being in flower against a sunny wall at Kew. I saw it flowering magnificently in the open in Mr. Ladham's Shirley Nursery, near Southampton, last week. Although it may be a charming wall plant, its proper place seems to be in the open, so that its beauty may be seen. The delicate rose-coloured blossoms are uncommon at this season of the year in the open.—E. M.

**Tulips.**—Mr. Hartland sends us from the south of Ireland a beautiful gathering of Tulips, including forms of *T. Gesneriana*, *T. retroflexa*, *T. macrospeila*, *T. Bouton d'Or*, very handsome, *T. vitellina*, &c. The flowers are of fine size and very clear in colour. We should like to see the species of Tulip oftener, as there is such a variety among them as regards colour and form. What could produce a finer effect than a mass of *T. præcox*, *T. Greigi*, *T. Gesneriana*, or *T. Bouton d'Or*?

**Ranunculus cortusæfolius**, or *grandifolius*, as it is named at Kew, is flowering in the little bog in the rock garden, but it is also to be seen in magnificent specimens grown in pots and now in bloom in the greenhouse. They are well grown and finely flowered, the leaves large and handsome, the flower-spike a yard or more in height, terminated by a flat-branched head of blooms, which are of the richest Buttercup yellow, and each as large as a five shilling piece. This was figured in THE GARDEN of January 13, 1895, p. 28.

**Snowy Mespilus.**—It is not possible to imagine a more handsome object than a tree of this 25 feet high and 20 feet through completely smothered with pure white blossoms. I lately saw two trees in a small garden along the Shirley Road, outside of Southampton, last week. Amongst authorities there appears to be some difference of opinion as to the naming of this shrub. It would be interesting to know its proper name. Perhaps someone will clear up the point for me, as I confess to uncertainty in the matter.—E. M.

**Rhododendron racemosum.**—This pretty new *Rhododendron*, received from Messrs. Veitch for trial, has come quite unharmed through the past winter. It is in an exposed position in the rock garden, and is now a perfect mass of bloom. It is certainly a welcome acquisition and a shrub that may be associated with the choicest alpine flowers, as the little bushes, less than 1 foot in height, are covered with bloom. The flowers are not in crowded heads like those of most *Rhododendrons*, but appear in clusters of two or three in the axils of the leaves all along the shoots. The buds are bright rosy pink, expanding into flowers with pink-tipped petals, shading to white. A coloured plate of this *Rhododendron* was given in THE GARDEN, October 8, 1892.

**Tulips at Kew.**—The only Tulips one generally sees in gardens are the early or late-flowering florists' kinds, but at Kew the species predominate, and some of them fill entire beds, showing unmistakably their beauty and value as garden flowers. Two beds of *T. fulgens* near the greenhouse are specially brilliant; the distinct form and tall, stately character of this species mark it as one of the very best. A curious feature of it is that the flowers are breaking into all sorts of variegations of colour like the feathered and flamed varieties of gardens. *T. Gesneriana spatulata* will be at its best shortly. *T. Batalini*, a fine yellow species, fills several beds. This, too, under cultivation shows a tendency to vary, the petals having a light fringe of reddish brown on their edges. *T. cornuta*, known also as *T. acuminata*, is more curious than showy, with its long narrow petals, but growing in the Grass at Kew it is brighter and even attractive. It is not

worth a place in beds and borders, but it has a new interest when naturalised.

**Charærops excelsa in Surrey.**—Here *C. excelsa* has stood 32° of frost well, and may be classed as perfectly hardy when thoroughly established in this (Surrey) and other counties in the south of England and Ireland. Our plants (about twelve in number) to-day (May 5) look beautiful. They are in a fairly sheltered position and are left uncovered as long as possible. We get some long Fir branches newly cut and stick them well into the ground all round each plant, lacing them round with twine, bringing the points together well over the centre and securing them there. This light protection admits plenty of air, and also obstructs the fierce rays of the sun in early morning after frost. *C. excelsa* likes a rather strong, well-drained soil, with a little artificial manure when established and plenty of water at the roots in dry weather, syringing overhead in the evening.—THOS. WHITFIELD, *St. Catharine's House, Guildford*.

**Violets.**—There are several charming species of Violets not often met with in gardens now flowering in the rock garden at Kew. *V. biflora* is a pretty little gem, but does not quite accord with its name. It has rounded leaves, but the flowers are borne singly on a slender stalk thrown well up above the leaf tufts. They are small, but of a rich yellow colour, with brown lines on the lower petal. *V. cucullata* has heart-shaped, pointed leaves and a profusion of flowers as large as those of the sweet Violet, light violet-blue in colour, the two upper petals larger and broader than the others, giving the flower a characteristic shape. A pure white form of this species was also in flower close by. *V. canina alba* is also worth growing, for though the Dog Violet makes sheets of colour in poor soil where the sweet Violet will not grow, and shows much variation in shades of blue, white forms in a wild state are most uncommon. The variety at Kew is distinct in shape, too, its petals being longer and more pointed than those of the type.

**Flowers from Newry.**—I send you a small gathering of spring flowers, some of which are uncommon. *Mertensia virginica rosea* is quite distinct. *Orobis vernus albus roseus* is the most charming *Orobis* I have yet seen. *Anemone blanda bicolor* is beautiful, buds blue, open flowers white. *Muscari Szovitzianum sub-ceruleum* is, I think, the best of all the *Muscari*; a mass of its charming pale blue is delightful. *Erythronium giganteum* and *grandiflorum* are thoroughly at home here in all aspects. They are very distinct and handsome and remain long in flower; the main distinction between them is that the former is usually one-flowered, while the latter bears from one to five blooms on a scape. *Fritillaria montana* and *messanensis* are distinct and easily grown. *Helonias bullata* in the bog is just opening hundreds of flowers. *Mertensia virginica* is splendid with ample foliage and stems 2 feet high, masses of delightful blue. The *Polyanthuses* in white, gold, orange, and bronze are a grand sight. *Sorbus majestica* with its ample silvery leaves is a most telling tree at the present time.—T. SMITH, *Newry*.

**Clivias.**—There is a large house devoted to these in the Forest Hill nurseries of Messrs. J. Laing and Sons, and although the plants are now rapidly passing out of flower, quite a number of fresh fine spikes was to be seen recently. The plants are interesting, too, in other respects, for some of them were just ripening up the seed-pods from last year's flower-spikes. The plant is not often seen in this state in private gardens for obvious reasons, but these seed-bearing plants are certainly handsome with their great red, oval berries, larger than Walnuts, several in some cases being on a spike. The object here being the improvement of varieties, naturally the number of seed-pods is reduced, but a plant that had a full crop of seed would be bright. Among the varieties still flowering at the time of our visit we noted the following: Right Hon. J. Chamberlain, which recently received an award of merit at the

Drill Hall, and has a fine truss of bright red flowers; Duke of Teck, handsome, broad petals, bright orange; Duchesse of Teck, large in flower and truss; Vivid, extra bright, as the name implies, quite a vermilion-red; and Empress Eugénie, most distinct, of a rosy buff colour shading to primrose in the throat, the flowers large, in a bold truss.

**Prunus Jacquemonti.**—This bushy plant belonging to the *Cerasus* section of the genus is one of the most beautiful of the dwarf species. Several plants are at present in bloom at Kew, the slender, wiry branches of last year's growth being thickly covered with the small rosy flowers. In certain districts of the North-western Himalayas it is a very common shrub at altitudes of 9000 feet to 12,000 feet. It is also found in Tibet and in Afghanistan, one of the plants in flower at Kew having been introduced from the latter country by Dr. Aitchison in 1879. The individual flower is about three-quarters of an inch across, and the leaves, which are lanceolate, quite glabrous, and from 1 inch to 2 inches long, closely follow the expansion of the flowers. A species nearly allied to this and frequently confounded with it is *P. humilis*, a native of China. It is of similar shrubby habit, and the corolla of the flower is of about the same size and colour, but whilst the calyx of *P. Jacquemonti* is long and tubular and has pointed reflexed lobes, that of *P. humilis* is shorter and smaller. The latter species is also a little later in flowering. Both are well suited for planting in groups near the front of a shrubbery or even in beds by themselves.—W. J. B.

**Polyanthuses at Hampton Court.**—At Hampton Court Mr. Graham has been trying the orange and yellow *Polyanthuses*, or bunch Primroses as many now call them, for spring bedding, and with such success that we do not remember to have ever seen anything finer in effect or so fragrant. There are thousands of plants, all of the yellow-flowered strain, and they fill all the beds beside the long walk and the long border on the opposite side. Probably in no garden, public or private, has such a quantity ever been grown at one time. The effect is charming, and a slight admixture of Tulips in different shades relieves the flatness and gives a little more colour. The strain is a good one, but Mr. Graham hopes to greatly improve it by selecting the finest kinds for seed production. This is the third year he has been growing the plants in this way, and a fresh batch is raised each year from seed. We saw the seed beds in which the young plants for next year's flowering were just appearing. The seed is sown in open-air beds protected from birds with nets, the seedlings transplanted when large enough, and removed to their flowering beds late in October. At no time do they ever have glass treatment, and no flowers grown under glass ever made a prettier picture.

**Spiræa arguta.**—The beauties of this *Spiræa* have more than once been referred to in the pages of THE GARDEN, yet it still remains so uncommon that no excuse is needed for mentioning it again. It is of hybrid origin, and was, I believe, raised on the Continent. More than two species probably are concerned in its parentage, but those whose characters most clearly predominate are *S. Thunbergi* and *S. hypericifolia*. The largest plant I have seen is between 3 feet and 4 feet high, and although it may possibly grow to a larger size than that, it belongs to the dwarfest section of *Spiræa*. Its dwarfness is indeed one of its charms, for the wiry-looking stems are arching or semi-pendulous, and all the flowers being produced on the upper side, the beautiful pure white sprays bending outwards in every direction are seen to the best advantage. These flower-clad shoots are those made last year, and are, as a rule, 6 inches to 9 inches in length; to obtain them as long as possible it should be planted in rich loam. So far as I have seen it flowers with uniform freedom, and no restriction at the root is needed either to produce abundant bloom or prevent the formation of over-luxuriant growth subject to damage by severe frosts. It may be increased by cuttings, but the

thin stems do not root readily, and I find it better to layer an old plant, and thus obtain nice flowering plants in a couple of seasons.—B.

## PUBLIC GARDENS.

**Open spaces.**—At the monthly meeting of the Metropolitan Public Gardens Association, 83, Lancaster Gate, yesterday, the Earl of Meath (the chairman) presiding, six new members were elected, and Lord Teynham was appointed a vice-chairman. It was announced that St. Peter's Churchyard, Walworth, would be opened on May 23 by the Prime Warden of the Goldsmiths' Company, that company having provided the association with funds for the laying out of the ground; that Woolwich Churchyard would be open as early as possible in June, that six seats had been accepted for Bartholomew Square; that the remainder of the churchyard of All-hallows, London Wall, had been made available for the public; and that the association would shortly erect gymnastic apparatus in the playground recently added to St. Nicholas Garden, Deptford. It was agreed to offer to lay out St. Mary's Churchyard, Bromley-by-Bow: to take steps to acquire, if possible, a triangle in Hornsey Rise, an enclosure in Upper Street, Islington, and other sites; to offer seats for St. Peter's Churchyard, Cornhill; and to negotiate for the improvement of the Brixton Oval, the remainder of Stockwell Common, a Jewish burial ground in Fulham Road, Walcot and St. Mary's Squares, Kennington, Arbour Square, St. Stephen's School Ground, North Bow, and a disused burial ground in Globe Road, Mile End. It was also agreed to co-operate with the other open spaces societies in efforts to secure the preservation of the Bute House Estate, Petersham. A letter from the association to the London County Council was read and approved, pointing out recent cases of building apparently infringing the provisions of the Disused Burial Grounds Act, 1884, and the Open Spaces Act, 1887. Particulars of certain vacant sites in Canning Town, Mile End, and Walworth were brought before the meeting.

**Royal Horticultural Society.**—The next meeting of the society will be held in the Drill Hall, James Street, Victoria Street, Westminster, on Tuesday, May 14, when a large show of hardy flowers, Daffodils, &c., is anticipated. At 3 p.m. Dr. Morris, of Kew, will deliver a lecture on the "Plants and Gardens of the Canary Islands." The lecture will be illustrated by dissolving views from the magic lantern.

**The weather in West Herts.**—All the days during the past week have been warm, and one or two of them very warm for the time of year, but as a rule the nights have proved moderately cold. On the 6th inst. the maximum reading in shade was 72°, which is very high for so early in May. During the last six days the temperature of the ground has been rising rapidly. At 2 feet deep it now stands at 54°, and at 1 foot deep at 58°, and at the latter depth is about 3° higher than the May average, and 5° warmer than at the same time last year. No rain has now fallen for seven days, and owing to the rapid evaporation that has lately taken place, the soil is already becoming dry. Throughout the week the atmosphere has been singularly dry. In fact on the 6th the difference between the readings of an ordinary thermometer and one with its bulb kept constantly moist amounted to as much as 16° at three o'clock in the afternoon. The record of bright sunshine has also been remarkable, the average daily duration amounting to nearly twelve hours. For only six hours altogether has the wind during the week taken any other direction than some point between north and east. A Blenheim Orange Apple came into blossom in my garden on the 7th inst., which is one day later than

the average date of the first flowering of the same tree in the previous nine years, and twenty-five days later than last year.—E. M., *Berkhamsted*.

**Slugs.**—We have a dreadful plague of garden slugs in this neighbourhood notwithstanding the severity of the winter. One would almost think it had been raining slugs. We have slaughtered thousands by night, which is the only efficacious way of curing the evil. Lime and soot are useless when they have once been rained on, and in any case they only drive the slugs away to feed and breed elsewhere. Nature and slugs will not alter their laws to suit the convenience of man, and the convenient bird theory will not go down very long with the master who wants his flowers. I saw a bed of seedlings three nights ago with the rows full of stalks, husks of seeds, and small holes. I held a *post mortem* inquest on the seedlings with two friends, and we could come to no decision. The next day I called my man and asked his opinion. "Why, sir, it's the finches; don't you see the husks of the Sunflowers. I have driven them off ever so many times." I was not satisfied, for no finch could have made the holes I saw, unless he kept for the occasion a spare beak about the size of a rook's. So I watched, and in the evening killed off about 50 square feet over 100 slugs. I told my man, and when he went up later on with a candle he found the seed bed swarming. The slug eats the seedling; the seedling withers; the lob worm fetches down the dead seedling; the lob worm brings up the husk, if any; the lob worm makes the hole; the finch is not in it.—J. WHITWORTH SHAW, *New Place, Lingfield, Surrey*.

## OBITUARY.

**Mr. J. Walker.**—We regret to announce the death, at the age of 76, of Mr. J. Walker, of Thame, Oxon. He died on Wednesday from an attack of apoplexy. Visitors to the R.H.S. meetings for many years past will have a vivid recollection of the splendid blooms of *Maréchal Niel* Rose that he used to exhibit in the early months of the year. Mr. Walker devoted much of his time to the improvement of the *Dahlia* and *Sweet William*, many fine varieties of each of which were raised by him.

**Death of Mons. D. Hooibrenk.**—I regret to inform you that M. Daniel Hooibrenk, a well-known gardener, has just died at the ripe age of 83 years. A native of Holland, he went to Paris and thence to Vienna, where he took charge of the celebrated gardens of Baron Hügel. From 1837 to 1849 he had charge of the famous collection of plants. When Baron Hügel gave up his gardens and the collection of plants was dispersed, M. Hooibrenk started with a part of it as nurseryman, and his work in gardening is well known. He was nominated by His Majesty the Emperor of Austria Knight of the Franz Josef's Order, and Napoleon III. conferred on him the Order of the Legion of Honour for a treatise on the cultivation of the Vine.—LOUIS KROBATZKI.

**Beetles in the house.**—Would "G. S. S." kindly say a few words about enclosed insects? The larvae, which very much resemble wireworms, occur here constantly in the coal-ashes under a fireplace in a kitchen, and the beetle is pretty often met with in various parts of the house.—W. M.

\* \* In reply to the above the insects you inquire about are the larvæ and perfect insect of the cellar or churchyard beetle (*Blaps mortisaga*), a not uncommon but by no means abundant insect. The larvæ more resemble mealworms than wireworms; indeed, they are nearly related to the former. More than once there have been instances of the larvæ having been ejected from the stomach of a person. Westwood quotes two cases: one was accounted for by the woman having daily drunk for some time water mixed

with clay taken from a grave. This insect is often found in cellars and outhouses and in churchyards. They appear to love moisture and darkness. It is curious that the larvæ should be found in such a dry place as the ashes under a kitchen fireplace. Perhaps there may be some cracks in the hearth beneath leading to holes in which they find a congenial habitation, and where, perhaps, some leakage from pipes or the boiler may afford them moisture. One would think from their long legs that the beetles were active, rapidly moving insects, but the reverse is the case, and they move about in the most demure fashion. The beetles are long-lived and of great vitality; they have been known to recover even after having been imprisoned in a bottle of spirits of wine for twelve hours. I do not think they do any harm in a house. If you wish to exterminate them I should clear away any rubbish, &c., near their haunts in which they can hide, and if there are any cracks or places in the floor into which they can creep, I should pour boiling water into them and fill them up with cement.—G. S. S.

**Grubs in Strawberry ground.**—I shall be obliged if you will tell me the name of the larva sent, also the best means of destroying them. I planted a large area to Sir Joseph Paxton and President Strawberries in deeply trenched Grass land done late in 1894 and early in 1895. Three acres of the ground are planted to dwarf Apple trees and bush fruits. They are looking very well. The Strawberry plants daily disappear by the 100. Half an acre I am planting Potatoes in. The whole piece of ground appears to be frightfully infested. I found those sent under two runner plants.—J. A. PORCH.

\* \* In reply to the above, the grubs you enclosed are those of the common daddy-longlegs or crane fly (*Tipula oleracea*). They are most difficult pests to destroy. It is not of much, if of any use employing insecticides. Keeping the ground well worked is useful in disturbing the grubs and giving the birds a better chance of getting at them. Nitrate of soda 2 cwt. to the acre and well watered in helps the crop, and is distasteful to the leather-jackets, as these grubs are often called from the toughness of their skins. Pieces of turf, slates, or tiles should be laid about near their haunts, as they often roam about at night and creep under such things for shelter during the day. These traps should be examined every morning.—G. S. S.

## BOOKS RECEIVED.

"Les plantes alpines et de rocailles avec figures." Par H. Correvon. Octave Doin, Paris.  
 Royal Gardens, Kew: Hand-list of Ferns and Fern Allies, Cultivated in the Royal Gardens; Official Guide to the Museums of Economic Botany.  
 "Manual of Forestry." W. Seebach. Vol. iii. Forest Management, Bradbury, Agnew and Co., Ltd., 8 and 9, Boulevard Street, London.  
 "London Catalogue of British Plants." G. Bell and Sons, York Street, Covent Garden.  
 "Dictionnaire des orchidées hybrides." Par E. Bohnaf. Octave Doin, Paris.  
 "Notes on the Distribution of the Amaryllidæ and other Liliaceous Plants in Grand Canary, Cuba, Jamaica, and Venezuela." By A. Worsley. Wesley and Son, Essex Street, Strand.

**Book on British seaweeds.**—Will any reader kindly tell me whether there is any good book published on British seaweeds?—MARINER.

**Names of plants.**—*J. Henshaw*.—1, *Amelanchier canadensis*; 2, *Phlox verna*.—*J. B.*—*Lonicera tatarica*.—*W. B. Hartland*.—7, not recognised; 8, *Tulipa retroflexa*.—*P. C. H.*—1, *Amelanchier Botryapium*; 2, *Daphne Laureola*; 3, *Megasea cordifolia*; 4, *Iris pumila*; 5, *Viola canina*; 6, *Polemonium coeruleum*.—*T. Ryan*.—Orchidæ minor.

**The Wild Garden: or, the Naturalisation and Natural Grouping of Hardy Exotic Plants, with a chapter on the Garden of British Wild Flowers.** Fourth edition, with wood engravings from drawings by Alfred Parsons, revised and enlarged. Lemay & Co., Lincoln. Price 12s.; well bound in half morocco, 18s. Through all booksellers.

No. 1226. SATURDAY, May 18, 1895. Vol. XLVII.

"This is an Art  
Which does mend Nature; change it rather; but  
THE ART ITSELF IS NATURE."—Shakespeare.

## FLOWER GARDEN.

## PRIMULA ROSEA AND P. DENTICULATA.

THESE two Himalayan Primroses have never made a better show or been more healthy at flowering time in my garden than this year. I am so often asked how I manage them, that I am induced to send this note for the benefit only of those who are not already satisfied with their success. In *P. denticulata* I include *P. cashmeriana* and some other varieties with unauthorised epithets added to the name. All of them grow from the same seed and have flowers ranging in colour from very pale to very dark purple, and leaves more or less mealy, according to accident. *P. rosea* also varies much in the intensity of the colour and the size of the flower, but not otherwise. This species also varies the name by superlative and superfluous Latin additions, and as any individual plant may be multiplied at pleasure, growers may choose the plant they prefer and keep it.

I give notes on the treatment of *P. rosea* first. The compact network of matted roots in this species binding the soil beneath it into a solid mass is a remarkable feature. The effect of this is that two years after planting all the food within 6 inches of the bottom of the plant has been so completely exhausted, that the Primrose dies of starvation. Life may last a year or two longer, according to soil and circumstances, but three years is its utmost limit in my garden. The soil for growing it must be fine and retentive and the situation sheltered, for though the species is very hardy, the flowers are often quite spoilt by spring frosts in exposed aspects. I prefer the north side of a wall or of a sheltered slope, for spring frost is less injurious to flowers facing north provided they are not exposed to sweeping blasts. Seed gathered from the best varieties may be sown as soon as ripe to get new selections, but a group of seedlings does not flower evenly or look as gay as a well-regulated group of divided plants. Division is hardly the right word for the treatment which *P. rosea* requires. After flowering, the plants should be dressed over the crowns with fine soil to encourage surface-rooting; then at any time between June and August, choosing wet weather, the clumps should be lifted, the mass of old roots cut off within an inch of the base of the leaves, and the plants carefully divided into single crowns. The leaves must not be injured, for if the leaf-growth is seriously checked by withering or bruising, the pieces may as well be thrown away. Till the leaves are firm and growing again, the plants should be shaded and well watered. I generally plant them in wooden trays 6 inches deep. The larger the number taken, say not less than 1000 at once, the less likely they are to be neglected. If the first batch fails, try a second, and a third. Each two-year-old plant will supply twenty or thirty crowns, so there need be no lack of material. These pieces should not be left too long—say not more than two months—without replanting in the place in which they are to remain, otherwise the roots will get hopelessly matted together. At any rate let them all be in their flowering places by the end of September, and do not expect them to flower well for more than two seasons.

This process must be repeated every year; the garden will then be stocked with yearling and two-year-old groups. This plan gives the best results. Dividing the old plants after the leaves are dead, in which case some of the old roots must be left, is less troublesome, but less successful. Last winter I tried dressing some of the groups with superphosphate, say a quarter of a pound mixed with a peck of soil to each group. The result was an enormous crop of flowers, two or three stalks with about thirty flowers each, on every plant, but many of the stalks were fasciated and the flowering was almost overdone. Two-year-old plants not so treated produce the same number of bunches, each expanding twelve flowers at 6 inches high. A good flower is just an inch across. This may seem large, but my strain has been improved by long selection. The above treatment may be varied by way of experiment, but frequent division in some way is a necessity.

*P. denticulata* is more easy to deal with, as it is best when raised from seed. The finest heads, both in size and colour, should be marked for seed, which may be sown as soon as ripe; it comes up so freely, that one head will easily give a thousand seedlings. When sown in June it will seldom grow into flowering plants by next spring, but the habit of root is so different from that of *P. rosea*, the roots being few and very long and large, that seedlings may continue close together in the pans until of considerable size or be planted out, a hundred or more in a square yard, and selected according to their size and forwardness for their flowering places. These, too, suffer from frost only when in bloom, and as they often try to flower soon after Christmas, every means must be taken to retard them, especially by transplanting late in autumn before the flower-buds are formed. After flowering, plants may be divided; even single crowns may be cut into quarters, or plants may be beheaded, and a crop of young ones will grow out of the stump of each root; but in spite of this great vital power, divisions are apt to look shabby, and seedlings are far better. This species sows itself, young ones coming up all round almost as thickly as round *P. japonica*, and these must be thinned before flowering; but those which are allowed to remain, especially at the sides of shrubby walks, flower better than those transplanted. Above all, clear away the old plants after two or at most three flowerings, as they become shabby and encumber the soil. The best show I have this year is under Gooseberry bushes, where they do not conduce to the encouragement of gigantic fruit, but look very ornamental in early spring, getting just enough shelter to save the flowers. Neither of these species forces well, but both are admirably adapted for cold frames, doing better in roomy boxes than in pots. In this way they may be made a useful ornament for a conservatory in February and March. To sum up, sufficiency of food and frequent renewal from a well-selected stock are the great points to be attended to in maintaining a good show of these early spring favourites.

Edge Hall, Malpas.

C. WOLLEY-DON.

**Lilium Henryi.**—As an all-round garden Lily this bids fair to be one of the finest species we have, as it is of such robust constitution that it will thrive under conditions such as many Lilies will absolutely refuse to grow in. The last winter, too, should be a good test of its hardiness, and in this respect, as far as my experience extends, it stands before a great many, for a couple of bulbs left in the open border without any protection whatever are now growing beautifully—in fact, much stronger than last year, while under exactly

similar conditions *L. nepalense*, *L. neilgherrense*, and *L. sulphureum* have all perished. The Bermuda Lily (*Harrisi*) and the Japanese forms of *L. longiflorum* are also pushing up in a weak and irregular manner. Up to the present, as far as it has come under my own observation, *L. Henryi* seems proof against the dreaded Lily disease, which plays havoc with many Lilies. A few years ago *L. candidum* and *L. auratum* were about the only two liable to be attacked, but now many species suffer greatly. Besides the two above mentioned, I have seen established clumps of *L. davuricum*, *L. speciosum*, and *L. tigrinum* dwindle away in the same disheartening manner. In justice to *L. speciosum*, it should, however, be mentioned that the clumps which perished were in close proximity to some masses of *L. auratum*; whereas some other plants of *L. speciosum* at a little distance therefrom were uninjured.—H. P.

## NOTES ON SNOWDROPS.

THE past winter has not been an ideal one for Snowdrops, and the severe weather delayed so many that their beauty was soon gone. The kinds which flower in late autumn or early winter were unusually late, and it was about December before such *Galanthi* as *octobrensis*, *corcyrensis*, and similar species or varieties came into bloom. Frost and snow overtook them before their flowering was over, and it was wonderful how unscathed many of them seemed when the snow departed. These kinds, generally bad doers, seem all to grow well here. I am sorry to say that *G. Olge*, of which I purchased a bulb at a good price in autumn, did not flower. Careful examination of a considerable number of these autumn-flowering Snowdrops leads one to the conclusion that there are too many names among them, and that a revision would be very desirable if it could be obtained. I fear the prospect is not very promising for this.

The other Snowdrops, as has already been indicated, were so late that the bright weather and sharp night frosts soon despoiled them of their beauty. I regret to say that the Snowdrop fungus has been more virulent this year, and through its ravages I have lost some of my most prized kinds. It has been more destructive among Snowdrops grown under the partial shade of trees than among those in full sun, and it is possible that a good "sun bath" may be found beneficial in the way of prevention. It is very galling to see some of your best flowers falling a prey to this fungus and to feel absolutely unable to prevent their decay. I think we have no newly-introduced Snowdrops to say anything about, *i.e.*, none of this year's introduction. Our generous friend Mr. Whittall does not seem to have met with any new ones last year, although in other directions his indefatigable exertions are doing much to increase the interest and beauty of our gardens. We are, however, better able to appraise the merits of some sent the previous year. Of these I think I have grown nearly all, although some have not flowered even yet.

The Cassaba Snowdrop is one of the largest and finest in my garden, having great, massive flowers and long, broad leaves. I have very few bulbs of this variety, but should those I have be an average sample of this variety of *Elwesi*, it should be one of the greatest acquisitions to our gardens. The *Aidin* one, which I understand to be the one named *Elwesi* var. *unguiculata*, has not this year shown the bold, defiant habit which distinguished it in 1894. It has, however, developed other merits, *i.e.*, by producing a large number of flowers from the same bulb, and by showing a marked tendency to produce offsets. Bulbs of this variety, very kindly sent me in 1894 by Mr. Whittall,

present the bold habit this Snowdrop has the first year after importation. The Kas Dagh variety of Elwesi has improved considerably, but is still not equal to some other varieties of this handsome species. The Galanthus from Samos seems rather tender and produces a small, thin-petalled flower of the Elwesi type. The one from Phœnika, Samos, seems even more tender, having been badly cut by the frost, and did not flower. That from Ananas Dagh, which looked as if it might prove rather like the Cassaba one, did not flower this season and seems entirely of weaker growth. One sent me last year by Mr. Whittall as ochrospeilus presents no points of difference by which it can be distinguished from the typical Elwesi, and I think it possible that the collectors employed by our benefactor may have made a mistake. The Cassaba and Aidin Snowdrops are decidedly acquisitions, and if the former has not yet received a distinctive name, I hope it may be honoured with the name of Mr. Whittall, as it would be a pity if his interest in the Snowdrops could not be marked in some such way.

Turning to other Snowdrops, I find there is some criticism of *G. Elwesi robustus*, it being said that it is not distinct enough to have a varietal name. I must demur to this, as it is quite distinct from the ordinary varieties of Elwesi. It is of tall growth, bears large flowers, and has great, broad leaves, much larger than those of the ordinary forms. Its defects are that the flowers, although large, are hardly large enough for the plants, and its leaves are not so elegant as one would desire. I should rank it as inferior to the Cassaba Snowdrop, but still as worth growing.

The Galanthus I received from the neighbourhood of Broussa in 1893, and which was pronounced to be almost, if not quite the same as byzantinus, has not, I am sorry to say, turned out to be a good garden plant. It does not improve under cultivation, and can hardly be considered an acquisition. It looks like a natural hybrid, and is particularly variable in leaf and in time of flowering. *G. Ikarie*, on the other hand, has shown its capabilities by withstanding our last severe winter, and by its retaining its good habit and distinct appearance. It is another of Mr. Whittall's introductions, which should have been mentioned along with his others. Of Mr. Allen's charming seedlings I have some diffidence in speaking, inasmuch as a number of those for which I have been indebted to the great kindness of the raiser have only flowered for the first time this year, and will not show their full beauty for another year or so. One cannot, however, while admiring them refrain from hoping that the dreaded fungus may spare such lovely flowers as Talisman, Aurora, Elwesi Beauty, Galatea, and the others in my garden. The yellow Snowdrops, *G. lutescens* and *G. flavescens*, have been particularly pretty this year, their yellow ovaries and markings of the segments being very pleasing. *G. nivalis poculiformis* has also been pleasing, and while *G. Van Houttei* within a few inches of it has disappeared, this rather delicate pure white variety is quite healthy. One cannot understand the erratic way in which *G. plicatus* and its varieties die off without any apparent cause. The green Snowdrop, *G. virescens*, grows upon one from year to year, as also does the curious twin-spined *G. Scharloki*, while such fine flowers as *G. Imperati*, *Atkinsi*, and *G. Melvillei* enlist our admiration from year to year. I hope Mr. Allen and others who know the Snowdrop better than I do may still give us their experiences of the "early herald of the infant year." The season is now over, but even amid the delights of the present time with its

hosts of Daffodils, its Tulips and the many other charming flowers of spring, we can surely cast a look back upon the chastest flower of all, the Snowdrop. S. ARNOTT.

*Carsforth by Dumfries, N. B.*

#### FLOWER GARDEN NOTES.

APRIL FLOWERS.—A retrospect of the month's display in the hardy flower garden is always instructive, because there is a reminder to take special note of those things that have been a success with the view to increase them at the first opportunity. The outdoor flowers of April, too, are naturally the product of perfectly hardy plants, and within the reach of all either in large or small quantities. So far as the April flowering shrubs are concerned, the display has been remarkably good, and in all cases where any one particular family or special varieties are wanted together in considerable numbers the effect has been quite up to the average. In the matter of this particular style of planting I do not mean huddling them close together so that they lose their individuality; this is by no means necessary. The plants should stand just clear of each other and be kept so by careful and judicious pruning, close enough so that when viewed from a distance a mass of colour is shown, and yet with a perceptible drop between the plants so that a table-like surface is avoided. The Ribes family rank among the best of early-flowering shrubs, and some of them seem as yet imperfectly known. *Sanguineum* is, of course, common enough, but it is not the case with *s. album* and *atro-rubens*, which flower with equal freedom and make a fine display when planted in large clumps. All the forms strike readily from cuttings and make capital little bushes by the end of the second year. Beautiful white-flowering shrubs of the same season are *Spiræa prunifolia* and *S. Thunbergi*. The foliage of the latter is of a very vivid green, showing off to advantage the sprays of tiny white flowers. A variety of colour is furnished by the *Cydonias* in different shades of scarlet, pink, flesh colour and white. I was afraid the two last-named—and more especially the white—had been seriously affected by the weather experienced in February. It was, however, only a browning of the buds, not enough to affect their development, as all the varieties have flowered splendidly. Yellow tints have been supplied by *Forsythia suspensa* and *F. viridissima*, two very useful April shrubs. The Daffodil is the hardy flower of April, and, so far as the present season is concerned, *Barri conspicuus* has been the king of Daffodils. Other varieties both in the trumpet and star sections may rank higher as individual flowers, but for furnishing a grand display *Clumax* commend me to the above-named sort. Flower-stems thrown up from strong selected bulbs were of extraordinary vigour. I did not measure any of them, but many must have been close on 2 feet in length. The above variety, as the statement indicates, was planted at the end of last summer on a well-prepared border. Common sorts naturalised where the soil and situation have suited them have flowered well, and as early varieties were kept in check by the severe weather, April has been more than ever the Daffodil month. The *Doronicums* have helped to increase the prevailing yellow shades furnished by Daffodils and some of the Polyanthuses, and have flowered well. A very fine display of pink trusses of flower, both as to size and quality, is still to be found on the old *Megasea* (*Saxifraga cordifolia*). I saw a lot of this the other day at the back of a sloping border faced by a good breadth of a terra-cotta-coloured Polyanthus, and the effect was very pleasing. The white Arabis, the purple Aubrietia, and *Violas* of similar shades of colour also make an effective display when associated with the *Megasea*. I said above the Daffodil was the flower of April, but a thoroughly good strain of Polyanthus runs it very close indeed, and personally I should prefer the latter. A north-west border 200 yards long by 4 feet wide

has been a lovely sight, and furnished us with a wonderful wealth of cut flowers. The plants were arranged as near as possible in colours for the sake of seed-saving, but a general mixture is the more effective. If all the different shades are well mixed together, the result is a beautiful display that can hardly be furnished by any other flower.

WALL PLANTS.—There has been a general look round the walls during the past week in order to remove any plants or portions of the same that failed to stand against the severity of the past winter, and although the losses are fortunately not heavy, one or two things are gone that we did not care to lose. The silver variegated Buckthorn is one; the portion of wall furnished, by the same always looked bright, and the long stems were very useful occasionally in a cut state. Fortunately there are some vigorous Dijon Roses on either side the Buckthorn that will quickly fill the vacant place. *Lonicera flexuosa* is entirely gone, and the golden *Lonicera* growing on the stem of an old Judas tree is badly crippled. We shall get some back-breaks on this Japanese Honeysuckle that will give a bit of life to the plant, but there is no prospect that the trunk of the old Cercis will be clothed from base to summit with a mass of foliage and flower as in previous years. It is not as yet an easy matter to estimate the damage on the varieties of *Ceanothus*. As stated in previous notes, these get very little pruning, with the exception of weeding out weakly stuff, and, so far as the strong shoots that were left are concerned, they seem to be cut back close to the branches, but there are signs of breaking away at the base of each shoot. The remarks already made as to the bush plants of *Cydonias* are applicable to those on walls, the buds were so brown as to lead to the inference that flowers would be very scarce, especially on the white variety. This, however, is not the case; the plants have been literally covered with bloom, and since the expansion they have not, as last year, had an exceptional frost to bring the flowering season to an abrupt termination. Roses on walls have not suffered at all with us, except in the one or two instances where they were exposed to the full force of the very bitter winds. Roses in variety are undoubtedly the most useful wall plants we have, the little shelter brings them along rather earlier, and the flowers from the wall hit the season between those produced under glass and others that are growing, as the ordinary standard and bush forms, on the open quarter.

Claremont.

E. BURRELL.

*Daphne Blagayana* has come through the trying winter and kept on flowering since the latter end of March. Light, but moist vegetable soil seems to suit it. The only needful thing to do in the case of strong specimens is to first find the stems near the older part of the plant, then sever them and leave them *in situ*. This done soon after flowering and the severed offsets left until September will cause them to develop plenty of new fibre, and render them fit for being dealt with separately.—J. Wood.

White Stocks.—These are now to be seen in quantity in Covent Garden Market. The Brompton and the East Lothian are both grown, but the latter is the favourite. For several months past this Stock has been offered in the London markets, but of course not in such abundance as at the present time. For purity and fragrance nothing can excel a good strain of Lothian Stock. The blooms can be used individually, wired up for wreaths and bouquets, or the spikes can be employed for decoration. For early blooming the seed must shortly be sown and the young plants shifted along, so as to get them well established in 6-inch or 7-inch pots by the autumn. They can then be subjected to a mild forcing temperature. This is the surest way of getting early bloom, but for a main supply a simpler method is pursued. The plants are put out under glass in autumn, and under such circumstances they give a wealth of bloom in April and up to June.—J. C. B.



## YUCCA RECURVA.

THOSE who seek sub-tropical effects and place tender plants in the open air for that object often neglect the noble hardy plants, of which there is a good selection, capable of making striking pictures of luxuriant vegetation, with few or none of the disadvantages entailed in the

time of the year. When from the centre of this great crown of leaves the flower-spike, rising several feet high, becomes a pyramidal mass of sweet, ivory-white flowers, no hardy flowering plant can compare with it in beauty. This Yucca should be frequently planted in our gardens, so as to have specimens of different

them. It is easily increased by detaching its fleshy root crowns, which soon make strong young plants if started in a frame or greenhouse. It is well to examine large plants after a fall of snow and shake out any that remains in the crown, as if a thaw by day is followed by frost at night, much damage will be done.



*Yucca recurva.* Engraved for THE GARDEN from a photograph sent by Mr. J. Pullham, Brossbourne.

use of plants that can only be placed outside in summer. The Yucca family is a host in itself, and one of the very best Yuccas is that here illustrated. In all states, young or old, with its graceful curving tufts of leaves rising from the ground or borne high on the stout stem, it is always a handsome plant and effective at any

ages succeeding each other in flower year after year. It grows best in a warm, well-drained soil such as that of the Thames valley. When one of the evening fêtes was held at Chiswick some years ago, a dozen of these Yuccas were all in flower at one time, and the picture was one not likely to be forgotten by those who saw

## APRIL IN SOUTH DEVON.

THE mean temperature of April, although 3° below that of April, 1894, was 13° above that of the average for the last seventeen years, which is 46.5°. On only one day (the 13th) did the thermometer on the grass drop below freezing point, and then only by one-tenth of a degree, though on three occasions—the 1st, 2nd and 15th of the month—the mercury fell to 32°. Rain has fallen on thirteen days to the extent of 2.43 inches, against 2.39 inches on seventeen days during April, 1894, the average rainfall for April being 2.69 inches. The total fall recorded during the first four months of 1895 is 9.65 inches, as compared with 10.22 inches for the corresponding period of 1894. As regards sunshine, April, 1895, has proved almost a counterpart of April, 1894—166 hours 49 minutes of sunshine having been recorded this year and 166 hours 30 minutes last year. From January 1 to May 1 there have been 491 hours 49 minutes' sunshine against 502 hours 35 minutes during the same four months of 1894. The total horizontal movement of the wind has been 6339 miles, the greatest daily total being 492 miles on the 6th—an average of 20.5 miles per hour. The greatest hourly velocity was registered between 11 a.m. and noon on the same day, when the rate of 41 miles per hour was reached. The wind has blown from the south or west for eighteen days, and on twelve days from north or east.

In the flower garden April is a month of promise as well as of bloom—promise in the swelling buds of the Peonies, in the ascending spikes of the Lilies, from the sturdy growth of *L. giganteum*, that bursts up through the earth as big as a man's fist, to the slender shoot of *L. canadense*; promise in the glaucous sheaths that enfold the Iris blossoms, while for bloom we have the families of the Narcissi, the Hyacinths and the Tulips; and what a thrill of delight at vivid colouring is given by the glowing scarlet of a mass of Tulip Vermillion Brilliant. The tall Crown Imperials perfected their pendent bells of pale yellow and of red, in the bases of which lay quivering the single drops of moisture that the children call "toads' tears." Narcissi, always a joy, have not given us such a lavish display as usual, *Stella* being the only variety that has bloomed profusely. Poppy Anemones have been mostly a failure, such foliage as was above ground at the end of the year being destroyed by the long frost. *Anemone fulgens*, than which no handsomer variety exists, after the first year invariably flowers poorly, fresh roots having to be procured yearly if a good effect is to be secured. The *Dondia* covered a corner of the rockery with a carpeting of its quaint flowers, which formed a striking contrast to the fragile white blossoms of *Thalictrum anemonioides* that was blooming hard by, while *Anemone ranunculoides*, with its bright Buttercup-like flowers, made a charming patch of gold in the background. This *Anemone* is not grown so largely as its merits deserve, and should certainly not be neglected by those who grow *A. apennina*, the two varieties flowering at the same time. The little Grape Hyacinths, of which Ruskin writes that the flower is "as if a cluster of Grapes and a hive of honey had been distilled and compressed together into one small box of celled and beaded blue," lifted battalions of their scented spikes from the brown earth, which towards the end of the month was on all sides carpeted with the azure of the Forget-me-not. In the lanes and hedgerows the white Violets were a full month later in their arrival than was the case last year, the Primroses, however, making up for their tardiness by blossoming in unwonted profusion. Now that the sap is running strongly, the mis-

chief that has been wrought by the severe winter can be seen on all sides. *Ceanothus* and shrubby *Veronicas* are mostly killed. *Escallonia montevidensis* is dead, and so are *Benthamia fragifera* and *Rhus Cotinus*, while *Escallonia macrantha* and *Berberis Darwini* have been very badly cut. Curiously enough, *Choisya ternata* in a very exposed situation is merely a little brown at the tips of the leaves, thus proving a much harder subject than was at one time thought.

Apple and Pear trees are looking well and are full of blossom, appearances at present promising well for a good fruit crop. S. W. F.

## THE ROCK GARDEN.

### VII.

APRIL 30.—During the past week the temperature has been much cooler and rain has fallen in abundance. Sunny hours have been few and far between, and, as a natural consequence, the number of fresh plants in bloom is not so large as it might have been. There are, however, among the new arrivals several handsome and interesting kinds, many of them well adapted for being grouped together for combined effect.

### TINY GEMS IN BLOOM.

Last week I mentioned several choice *Androsaces* which might be grouped together in the select part of the rock garden. These are still in bloom, and as yet have lost but little of their beauty. The choicest rock plants which have opened here this week are *Eritrichium nanum*, *Saxifraga calveiflora*, and *S. aretioides*; these go exceedingly well together, and are also very fit companions for the *Androsaces* already mentioned, although they commence to bloom a week later. *Eritrichium nanum* (the little Fairy Forget-me-not) is doubtless a gem of the first water, with its peculiar cushion of hairy foliage and its bright blue flowers. A great drawback is the difficulty in its cultivation. It flowers and thrives in the rock garden easily enough during the summer months, when it loves also plenty of moisture at its roots, but during the winter it is so susceptible to wet that even a few drops of rain on its hirsute foliage may be sufficient to cause its death. The best way of planting the *Eritrichium* is to put it into an almost vertical fissure, so arranged that the roots can have plenty of moisture and no water can rest on the foliage, which latter might during the winter receive the additional protection of a piece of glass. *Saxifraga calveiflora* (from the Pyrenees) is a very distinct and handsome plant; its short and comparatively broad encrusted leaves are pointed at the apex and arranged in a somewhat elongated rosette, from the centre of which the bright red bracts and flowers are produced on a stout stem 3 inches high. It does not grow well in ordinary soil and objects to limestone, but when planted between two stones and into gritty soil which has received an abundant admixture of broken flints or granite it does remarkably well, especially in a sunny position. *Saxifraga aretioides* is also from the Pyrenees, and an excellent companion to the former. Its flowers are deep yellow, and its stem and calyx are partly tinted a bronzy brown. The very minute leaves are arranged in tiny silvery rosettes packed together so closely as to resemble more an *Androsace helvetica* than a *Saxifraga*. It does best in a sloping position where it would be well drained. *Saxifraga lantoscana superba*, which is also just coming into bloom, cannot be called a "tiny" gem, as it grows more freely than either of the varieties mentioned. Its rosettes of handsome encrusted leaves and its compact spike of large pure white flowers are, however,

so beautiful, that it deserves a good position in the select part of the rock garden.

### OTHER ROCK PLANTS IN BLOOM.

The following plants now blooming in various rock gardens in this county would be too rapid in their growth to be associated with the smallest plants; they are, however, indispensable in the rock garden, and it is well to allow them the space they require if other plants are not to be endangered. *Dryas octopetala* quickly forms a spreading evergreen carpet, now studded with large white flowers; it loves a moist and sunny position, and is best adapted for level ground. *Dryas Drummondii*, with yellow flowers, and *Dryas lanata*, with cream coloured flowers and slightly woolly leaves, are good companions for the former, and also now blooming. Another carpeting plant too well known to need any further description is *Arenaria balearica*, which is more suitable for covering stones, to which it clings very closely, especially in a half-shady position. *Gentiana acaulis*, the commonest, but after all the very best of all *Gentians* for forming large masses, is in splendid form just now. A moist position and gritty soil are what it loves best. Another charming blue flower is *Veronica saturcioides*; it has very small leaves and upright racemes of flowers; not only the petals, but also the stamens are blue and bear purple anthers discharging whitish pollen. *Rhodiola rosea* is in full bloom; its glaucous leaves and yellow flowers remind one of *Sedum*. It is, however, not an evergreen, but is invisible during winter. The alpine Forget-me-not (*Myosotis alpestris*) is also in bloom, its blue flowers forming a capital contrast to the large white blossoms of *Ranunculus amplicaulis*. This, by the way, does not spread very fast, and to make an effective group several should be planted close together. It is a very desirable plant, seldom growing more than 9 inches high. *Ranunculus gramineus*, with grass-like foliage and yellow flowers (much smaller than those of *R. amplicaulis*), is also effective. *Saxifraga Walpacci* and many others of the larger kinds of *Saxifragas* now begin to show their white flowers to great advantage. These will grow in almost any soil and in any position, and are best adapted for growing in masses not on, but between the more massive rocks and carpeting the bare soil between larger plants. The double form of *Saxifraga granulata* is very pretty with its double white flowers, but it is not an evergreen. *Tiarella cordifolia*, the Foam Flower, is best assigned to a semi-wild spot in the background of the rock garden, where it may ramble as it pleases under the shade of shrubs. A half-shady spot might be reserved for the vigorous American Violet, *Viola cucullata*, and its white form, *Viola cucullata alba*.

### LARGE PLANTS IN BLOOM.

There are several of the larger plants now blooming which will grow in ordinary soil, and might with good effect be arranged as single specimens or in colonies on open spaces between the groups of rocks. There are for sunny places the yellow *Stylophorum diphyllum*, *Anemone narcissiflora*, with pure white flowers; *Geum montanum*, yellow; *Doronicum excelsum*, yellow; and the handsome varieties of *Megasea*, such as *M. crassifolia* and *M. purpurea*, with pink and purple flowers and evergreen, large, catherly leaves, most suitable for bold effects.

In moist soil and in a half-shady position the handsome *Mertensia virginica* is now in full bloom, with its drooping raceme of blue flowers.

*Eschr.*

F. W. MEYER.

(To be continued.)

### SEEDLING DAFFODILS.

I SEND a few seedling Daffodils, some of which, as will be perceived, are from the old double and vary somewhat in form and colour. I have often thought that the old Ajax *Telamonius* might be improved, and in one respect I may claim to have made a step forward. One of my seedlings, which resulted from crossing the old double with the Tenby, blooms from ten days to a fortnight earlier than the old form. I have over a period of five years proved this early-flowering character to be fixed and not in any way dependent on the weather. Growing side by side, this seedling is invariably nearly or quite a fortnight in advance. Everyone knows how valuable the old double yellow is for growing under glass. A form of it that naturally flowers two weeks earlier than the type ought to be useful. I feel confident that this will at some future time be in favour as a market Daffodil both under glass and in the open air. Florists to whom I have supplied flowers of it are of this opinion. I have also a seedling which is as regards time of flowering just the reverse of the preceding. It comes into full flower just as the old Ajax is passing away, so that these two varieties extend the blooming period of this Daffodil nearly or quite a month. This late blooming form has very big flowers, which, as will be seen by the bud enclosed, are wonderfully vigorous, even more so than in the parent. The old double Daffodil can be established with ease in the meadow, woodland, or orchard; it flourishes in all soils, and is so effective when in bloom, that I think all lovers of flowers, and particularly of Daffodils, would desire to prolong its flowering period. The parti-coloured double flowers, which are composed of white and yellow petals, represent an attempt to raise double white Daffodils. I hope they are a step in the right direction, for I see no insuperable obstacle to obtaining a race of double white varieties having large blooms and of robust, vigorous constitution. The flowers sent are from the same pod of seed and vary, as will be seen, in doubleness. They are the produce of small bulbs but four years old from the seed. In a general way seedling Daffodils take from five to seven years to flower, and in my experience they do not attain to their full bloom-bearing powers until they are a couple of years older. The plants that gave these flowers are very green and vigorous looking, and I am, I think, justified in assuming that in due course they will yield blooms double the size of those sent. The small flowers are from *obvallaris* and *nanus*; this cross gives quite a succession of bloom. The single yellow trumpet is from *Emperor*, but I am not aware with what it was fertilised. It seems to be as good as its parent, and is about ten days earlier than that grand Daffodil. It will probably be bigger another season. Being so early, fine in colour and remarkably vigorous, it ought to make a good market Daffodil. Last season the question was asked in THE GARDEN whether it would be profitable to raise sulphur-coloured Daffodils between *obvallaris* and *cemum*. This I have done, the progeny having a long trumpet and standing out boldly from the flower-stem in the manner of *obvallaris*. I include a bloom of the Irish form of Ajax *Telamonius*, which is distinguished by the unbroken trumpet. It is, I believe, found in two or three localities only in Ireland, from one of which I got my bulbs. I have never seen this variety in English gardens and am rather at a loss to account for its existence, but should imagine that either soil or climate has through a series of years acted on the original form. I should not suppose it to be a

seedling, for with me it varies considerably, a good many of the flowers occasionally reverting to the old form, whilst in some years nearly every bulb produces flowers with unbroken trumpets. It is, I believe, in a naturalised state in the vicinity of old monastic or castle gardens that this form has been found, and in soil of a semi-boggy character. This is what I have been told by those who have seen it growing, and every flower comes like that enclosed. When March and the early part of April are very fine, a large proportion of the flowers bursts, but in a cool, late spring like this nearly every bloom comes true to character. The pale coloured flower is from *obvallaris* and *cernuus*. We have many white-flowered Daffodils, but they are not quite so robust as might be wished, and are somewhat fastidious as regards soil. We want good white Daffodils that will flourish in any soil and that can be naturalised in the Grass or woodland—that are, in fact, as vigorous and reliable as the Tenby, Princeps, or Old Double. J. CORNHILL.

**Honesty.**—There appear to be three distinct varieties of this charming biennial, the



*Pelargonium Dr. Andrei.*

early crimson, the deepest coloured of all, the ordinary pale purple, and the white. Some plants will come among the ordinary purple bearing flowers partly white and partly purple, probably the result of crossing through insect agency, but anyone who desires to keep the varieties true to character should not save seed from such. I have grown plants of all the three varieties of *Honesty* for years, but I scarcely ever before saw them so much injured by frost as in the early part of this year; the plants appeared to be hopelessly killed and were little better than rotten stumps. Yet there was a reserve of vitality in them, and it was astonishing to see how they rallied and put forth new growth when warm weather set in. Patches of the three colours now in full bloom are very effective.—R. D.

**Christmas Roses.**—I have no doubt that the soil in which the roots are growing has much to do with the repeated failures of Christmas Roses in some gardens. I know a garden where some hundreds of plants, including nearly all the varieties, have been planted at various times, and in spite of the care bestowed in planting not one single clump is in a satisfactory condition at the present time. Not only have the plants been tried in various parts of the garden, but they have been planted in specially prepared compost in large tubs with similar results. In this case the roots are first affected, changing to a dark colour and finally rotting. The leaves next follow suit until

the clumps are wholly denuded. The soil in this garden is of a dark sandy nature. Very often where Christmas Roses succeed fairly well without special attention being paid to them they might succeed better by supplying them liberally with moisture during the month of May when new leaves are being made, should the weather be hot and dry at that time. I notice plants that make abundant leafage annually give a better crop of blossom than those which make hardly any new leaves. I find mulchings of freshly gathered horse manure beneficial if applied early in May.—E. M.

## STOVE AND GREENHOUSE.

### DECORATIVE PELARGONIUMS.

EXCLUSIVE of the zonal, nosegay and Ivy-leaved forms so often spoken of as Geraniums, the different Pelargoniums are for convenience sake divided into several sections, but opinions differ as to the place that should be assigned them, their parentage being in a very mixed state. At one time only the large-flowered or show section

distinct blotch and in others this spot was limited to the three lower ones. Some again were without any decided spot. A good example of these French Pelargoniums is that here illustrated—*Dr. André*, which is a very old variety, but still one of the best that we have. A quarter of a century ago the recognised sections into which Pelargoniums were divided consisted of show, French or spotted, and fancy, but soon afterwards the name of regal Pelargoniums was bestowed upon a group that sprang into existence about that time. The flowers of these regal Pelargoniums were large and consisted of an unusual number of massive petals, the earliest examples of them being *Captain Raikes*, *Queen Victoria* and *Beauty of Oxtou*. As this group became popular the term “regal” was applied to many that had no claim to the designation. Then a sensible suggestion was acted upon by many, and those sections known as French, spotted and regal were, in common with the popular market forms, all included under the head of decorative Pelargoniums, thus leaving only the show, fancy, and decorative groups. The best of these decorative varieties are of great use to the gardener who has to keep a structure gay at all seasons, their great variety in the form and colour of the flowers and other features rendering them as a group more interesting than a corresponding number of show varieties in which there is less variety in the shape of the flower and its markings. Pelargoniums, especially the decorative varieties, usually form a conspicuous feature at the Temple show, two of the largest contributors within the London district being Messrs. Hayes, of Edmonton, and Mr. H. J. Jones, of Lewisham. The plants are not remarkably large, for pots 5 in. to 6 in. in diameter, so popular with market growers, are the sizes principally used, and Messrs. Hayes have for many years been noted for the beautiful little flowering examples that they grow in pots only 4 inches in diameter. There are a great number of desirable varieties, but as tastes differ in this respect, a good plan is to inspect a collection when in bloom and make a selection therefrom. In selecting any particular variety, the habit of the plant should be especially taken into consideration. With the present wealth of varieties there is no need to grow plants of weak constitution. Some of the fancy varieties are decidedly pretty and bloom most profusely, but they are not grown to any great extent. H. P.

was generally cultivated, and the members of this group still hold their own. A good show flower is almost round, with the edges of the petals smooth. The two upper petals of these show varieties are blotched with a deep colour, often nearly black, and frequently to such an extent that they are almost entirely of that tint. The three lower petals are without spots or blotches, while in many cases the flower has a large white eye often spotted with violet. The individual blooms of the best show varieties are large and brightly coloured—indeed, some of the richest tints of all are to be found in this section; but in the case of the brightest-coloured forms few flowers are borne in a truss, and the constitution of the plant is, as a rule, weak, so that most of them run up tall and thin. This is to a great extent the result of continuous intercrossing. A decided break away from these show varieties was made forty years ago or thereabouts, when the French raisers sent a number of new forms to this country. Although the blooms did not conform to the standard of show flowers, yet the plants were free in growth, profuse in bloom and of good habit, in addition to which the individual flowers had in many cases the edges of the petals prettily crisped and undulated; the colour also varied, and in some cases each petal had in the centre a clear and

**Ivy-leaved Geraniums.**—These appear to be finding more favour for a variety of purposes in many gardens, but it is more particularly to their value for covering back walls of vinerias that I should like to draw attention. After having tried Roses, Figs, and almost all fruiting or flowering plants on these back walls none have proved so generally satisfactory as Ivy-leaved Geraniums. Roses are prone to insect pests, Camellias get troubled with scale, and seldom flower well under the shade of Vines. Figs are not very prolific in such a position; in fact, a long list might be given of plants that are practically a failure, but Ivy-leaved Geraniums are certainly an exception. In a range of three vinerias we have the back walls clothed with these plants in variety, and it is astonishing the quantity of flowers they give from the end of February to the middle of June. The only insect foe that ever appears on the plants is aphid, which sometimes comes soon after the Vines are started, but a good fumigation soon disposes of the enemy and we are not troubled with it again for the season. Some state that thrips attack the foliage, but since planting them nine years ago not a thrip has been discovered upon them. When the vinerias are cleaned and made ready for starting again, the plants are well cut back and some of

the growth removed entirely. No further labour is required beyond tying in a few leading shoots to cover the wall, all the other growths are allowed to hang down loosely, as they are less formal and do not give the wall a stiff appearance, and when in flower they present one mass of colour. By planting a mixture of varieties, arranged so that the different colours will have the best effect, a charming combination can be obtained. At the head of the list I place *Souvenir de Charles Turner*, as it is one of the best wall plants, being vigorous and very free, flowers large, deep rose, nearly scarlet, and of perfect form. *Louis Thibaut* is very free flowering and a good grower, flowers cerise in colour. *Kycroft Surprise* is a splendid variety, flowers of a fine salmon colour, trusses and pips very large. *Mme. Emile Galle* is, I think, the best white, the flowers large and freely produced. Other varieties could be named, but the above four have proved the best with me.—W. G. C.

**Malmaison Carnations.**—In a private garden in this neighbourhood I lately saw an excellent lot of the ordinary form of *Souvenir de Malmaison* Carnation. The plants are in 6-inch pots, are green as Leeks, with foliage down to the rim of the pots. They have been flowering since last November up to the present time, and will evidently continue to do so for a couple of months longer. They are the best lot of plants of the size I ever saw. It may be remembered that I have more than once expressed the belief founded on experience that the best results in the case of the *Souvenir* and winter-blooming Carnations are to be had from two-year-old plants. From plants layered the preceding summer and put into 5 inch pots early in the year one may get good blooms, but the amount obtained from the space is not nearly so great as can be had from older ones. The plants above-mentioned were put into the pots in which they are blooming over eighteen months ago. They have not run up leggy, but are comparatively dwarf, and carry about a dozen flower-stems each, the blooms opening well, without the objectionable eye that characterises this Carnation when the plants are not in good condition. They are grown in the open air all through the summer months. My impression is that only plants of this description are really profitable.—J. C. B.

**Calceolaria Burbidgei.**—Notwithstanding the fact that the raiser of this *Calceolaria* could never do much with it as a pot plant (as detailed in *THE GARDEN*, p. 306), each recurring season it is very fine at Kew grown in this way, and forms an ornamental feature in the greenhouse throughout the greater part of the autumn and winter. Of course, large pots are used, and the plant runs up to a height of 4 feet or more, but it produces a great number of stems and a very large quantity of blossoms. It is a useful subject where glass structures have to be kept gay at all seasons, and its soft yellow blossoms are quite distinct from those of any of its associates, which at that season of the year are none too numerous. Though this *Calceolaria* is readily propagated, yet, in common with its parents, it cannot be easily obtained from any dealers in plants; the reason given is that subjects such as this are sought after only by lovers of out-of-the-way plants; hence the demand for them is so limited that it does not pay to keep them in stock. This is in all probability correct, as, despite the great number of plants available for greenhouse decoration, the kinds grown in many gardens are very limited, the usual selection of *Fuchsias*, *Pelargoniums*, *Petunias*, *Heliotropes*, *Lobelias*, *Begonias* of all classes, and such things being, as a rule, very generally met with.—H. P.

**Carnation notes.**—The present is an anxious time with growers of tree Carnations, as early-struck plants in small pots will need attention in the way of repotting and staking, and there is usually at this season a press of other work. An extra effort, however, should be made to get them shifted before becoming pot-bound, or they are

liable to refuse to grow away freely and sometimes turn yellow and sickly. Before removing them I always like to fumigate slightly twice, giving the foliage a good syringing after each dose, as the nights are often cold all through May. I prefer keeping the plants in a very cool, airy house until quite the end of the month; I then stand the pots on ashes in frames, airing carefully at first, and in June drawing the lights off by day, tilting them up during wet weather. Towards the end of June the plants should be ready for their flowering pots and for standing out of doors in a sunny position on a bed of coal-ashes. Great care is needed at all times in watering Carnations, but more especially after potting and until new roots are working freely in the new soil. If wet weather sets in I sometimes turn the pots on their sides for a few days, as at this date, if the soil once becomes sodden the whole batch will be liable to perish. Good, light, friable soil suits Carnations best. I always use the trimmings of pleasure-ground walks and drives. This contains a good percentage of grit, and after having lain twelve months it is fit for use without any addition, save a little leaf-mould.—J. C.

#### GREENHOUSE ARAUCARIAS.

Of the numerous species of *Araucarias* that are in cultivation only one, *A. imbricata* (the Chilean Monkey Puzzle), can be considered hardy in this country, all the others requiring the protection of a greenhouse, and some of them are very popular for growing under glass. The most generally grown is the Norfolk Island Pine,

*ARAUCARIA EXCELSA*, which when fully developed will reach a height of 150 feet or more, and yet when not more than a foot high forms a beautifully symmetrical-shaped specimen; hence it is very popular for table decoration, for furnishing vases indoors, and such like purposes. Owing to its popularity considerable quantities of seeds have been imported within the last few years, so that it can now be obtained at a cheaper rate than was at one time the case, but for small specimens seedlings are not much sought after, as they are not so well furnished at the base as plants raised from cuttings. The cuttings, of course, must not be formed of the side-shoots, as they will never make a symmetrical-shaped plant, the leading shoots only being chosen for the purpose. Where this *Araucaria* is propagated in quantity old stock plants are usually kept for the supply of cuttings, that is to say, plants that have become bare at the base or outgrown the space allotted to them. If the tops of these plants are cut off they will usually push out two or three or even more leaders, all of which directly they are firm enough may be taken as cuttings. These stock plants will continue to yield shoots in this way to a greater or less extent for years, and in this manner a large quantity of healthy young plants may be obtained. The cuttings need to be put into small pots of sandy soil and placed in a close propagating frame till rooted. Given conditions favourable to growth and ample space for the development of the plants, they will form equally symmetrical specimens, whether a couple of feet high or ten times that height. Hence they are very popular for large conservatories, and with care may be kept in health for years in a large pot or tub. Individual plants of this *Araucaria* vary a good deal from each other in many particulars, and some well-marked forms are in cultivation. One variety, *glauca*, has the foliage of a rich glaucous hue, and when a good form is obtained it is a really striking plant. Another beautiful variety is *robusta*, and a well-marked one is *alba spica*, but as regards its beauty opinions vary. The young growth of this is white, changing when mature to green, but the entire plant lacks the vigour of the type, and is, generally speaking, as an ornamental plant inferior to it.

*ARAUCARIA BIDWILLI* (the Bunya-Bunya Pine of Eastern Australia) is a very distinct species, but

one not often met with, for in a small state it has a loose, ungainly appearance, at least in most instances, though occasionally a neater growing individual may be met with. The leaves are lanceolate, very sharply pointed, and of a deep glossy green colour. It is more fitted for large structures such as the temperate house at Kew, and under such conditions it forms a handsome dense growing specimen of the richest green. From 6 feet upwards, this *Araucaria* shows more of its true character than it does below that height.

*ARAUCARIA RULEI* is a beautiful and distinct species with wide-spreading branches and partially drooping branchlets. The leaves are thick and dark green, while the entire plant has a massive stately appearance. It is very beautiful when not more than a yard high, but is equally effective as a larger specimen. A thriving plant of this *Araucaria* always commands a good price. There is a variety of *A. Rulei* known as *elegans*, far more slender in all its parts than the type, but it is usually unhappy-looking and in no way desirable. Nearly allied to *A. Rulei* is *A. Goldieana*, whose foliage is more slender than that of *A. Rulei*, but intermediate forms are sometimes to be met with.

*A. CUNNINGHAMI*, one of the most useful timber trees of Queensland, has needle-like leaves as in *A. excelsa*, but instead of the branches being arranged in a regular frond-like manner as in that kind, those of *A. Cunninghami* are more tufted and clustered, thus giving to the plant altogether a more irregular outline, which is maintained when the specimen attains tree-like dimensions. It is more effective over 4 feet to 5 feet than it is under that height. One variety, *glauca*, is very attractive by reason of its silvery foliage.

*A. COOKI*, which is a native of New Caledonia, has the finest and softest foliage of any of the *Araucarias*, and it requires rather more care and attention than most of the others. The branches are numerous even on small plants, and well furnished with partially drooping branchlets, which in their turn are thickly clothed with short awl-shaped leaves. If this *Araucaria* is at all neglected, the foliage quickly acquires a yellowish hue, and it is then very difficult to restore it to its normal tint.

*A. BRASILIENSIS* is a common tree in some parts of Brazil, but it is very little grown in this country, its ornamental qualities not being of a high order. T.

#### KITCHEN GARDEN.

##### ROOT GALL IN TOMATOES.

We enclose a root of Tomato infested with elub. The plants have been put out two months and have been looking well until now. The plants flag during the day, and on examining the roots we have found them as per sample sent. Can you suggest a remedy?—HUBERT & MAUGER, *Gurnsey*.

\* \* A bad case of root gall, the same being caused by *Heterodera radicola*, a minute worm said to be allied to *Trichina*. When the roots are taken possession of by these much-to-be-dreaded nematodes, or eel-worms, and which serve not so much as a feeding as a breeding ground, they soon become badly swollen, ceasing then to fulfil their natural functions. It is during bright weather that evaporation of moisture by the foliage goes on the most briskly, and the roots failing to supply this in sufficient quantities, flagging and a general breakdown inevitably result. Once more the old saying, to the effect that prevention is better than cure, applies. In the case of plants so badly affected it is doubtful if a remedy can be effectively applied. What has done good service in the case of a form of eel worm that takes possession of the stems near the surface of the soil might well be tried, and this is phenyl phenol, or carbolic acid. I am using it by way of prevention, and have great faith in the preparation. Those who order several one-gallon drums of this can get

it from a chemist at the rate of 5s. per gallon, but a single one-gallon drum would cost more, or from 6s. to 7s. 6d. each. One pint of this preparation I find sufficient for one hundred gallons of water, and a thorough soaking of it is given before the soil is dry or soon after water has been applied. At this strength not a plant out of thousands has been injured, but, on the contrary, the plants are benefited by its application, a certain amount of nitrogen being present in the phenyl. It may be that two or three applications of this manifold disinfectant to the roots may restore them to a more healthy state and prevent a complete failure, but I should not rely too exclusively upon it, preferring rather to raise a fresh lot of plants with a view to having heavy late crops. In all probability the soil now occupied by the plants was similarly cropped last season, and trenching or the addition of so much fresh soil and manure would not have done anything towards getting rid of any eel worms left in from a slight attack last year. The tiny pest also seems to be most often present when much decayed vegetable matter, including rotten manure, is freely mixed with the soil, and the first attack in such cases is usually a very severe one. Drenching such soil with the diluted phenyl is an excellent preventive, but ought not to be wholly depended upon. If the soil cannot be fre-hened up by trenching and a free addition of fresh loam and fresh horse droppings rather than stale manure, pot culture should be resorted to for one or two seasons. Wholly changing the soil in a large house or several ranges of houses is a very expensive proceeding, but enough fresh soil can usually be looked up for several thousand 10 inch or larger pots, and under pot culture, accompanied by an occasional application of phenyl, nematode worms can be defied. The American remedy for the complaint is a thorough exposure of the soil, in and out of the houses, to the purifying influence of severe frosts. In Guernsey it is doubtful if enough frost is registered to have much effect upon insects or animals in the soil, especially if covered with glass. Last winter the soil in many Tomato houses was hard frozen, and was thus all the better for the exposure.—W. I.

**Early Cauliflowers.**—At p. 284 "E. M." advises Early London for early summer use. The Early London in a light soil I find is not of such compact habit, the head or flower opening quickly. It must not, however, be thought I do not advise its culture, as very likely "E. M.'s" soil just suits it. The Early London is closely allied to two varieties now less grown than formerly, the Stadtholder and the Walcheien, but of the three I prefer the last on account of its compact growth and the heads, being so much better covered with foliage, are whiter and closer. For first cutting in May to follow the late Broccoli I prefer the Dwarf Erfurt Mammoth, which turns in ten days or a fortnight earlier than the Early London, and is in my opinion of superior quality. The Erfurt is quite as hardy as the Early London, so is very suitable for autumn sowing.—S. H.

**Wintering Lettuces.**—At p. 272 Mr. Tallaek gives us sound advice as to wintering Lettuce. It is strange how different localities have fared with regard to the past severe weather. All my plants perished, no matter whether sheltered by glass or in the open. I must admit this is the first season I have lost the entire crop, and many large growers who had splendid beds of Hardy Hammer-smith—one of the very best winter Lettuces grown—are similarly situated. By sowing Veitch's Golden Queen indoors in February I am now cutting nice heads, small certainly, but valuable. This is one of the earliest varieties to heart in I have grown, being fit for use in eight weeks from time of sowing.—G. WYTHES.

**Notes on Spinach.**—In most gardens Spinach will have come in useful. Though cut up by the severe frost early in the year, it quickly recovered with the advent of warmer weather, and has supplied very acceptable dishes daily for weeks

In addition to the well-known Prickly or Winter Spinach, the Perpetual or Spinach Beet has done extremely well, and no doubt as the latter becomes better known it will be extensively sown for standing the winter, as it produces immense quantities of large leaves that cook remarkably well and are of very good flavour. When first I grew the Spinach Beet I was unfavourably impressed with it, as the foliage came white or nearly so, and a moderately sharp frost killed it. Several gardening friends had a similar experience. Fortunately, I got the true variety, and now I should be sorry not to have a good quarter in the garden. A new variety of Spinach sent out by Messrs. Carter, High Holborn, named The Carter, promises to be an acquisition for spring and summer work. Sown on a warm border immediately the ground would work freely after the frost, it came up quickly, and is now (May 7) supplying large thick leaves of fine quality, while the ordinary round or Summer Spinach will not be fit to pick for another fortnight, though sown under exactly the same conditions. Few crops pay so well for thinning and liberal manuring as Spinach. Many rows are over much sooner than they would be and produce a much smaller crop of leaves than would be the case if the plants were thinned out to about 6 inches apart in the rows, to say nothing of the favour the large leaves find in the kitchen compared with a multitude of small ones.—W. G. C.

**Mushrooms in fields.**—In face of the depression in the value of most crops and the great difficulty cultivators of the land find in making ends meet, it may perhaps be useful to draw attention to the easy manner in which Mushrooms can be grown on pasture land that is naturally adapted to produce this edible fungus. There are thousands of acres that would grow Mushrooms admirably, and prove a source of profit to the occupier without any loss or detriment to the Grass crop; in fact, if conducted as hereafter described, the Grass will be considerably improved, and yield more per acre than if not so treated. The first step is to procure good spawn that will run freely when placed in a suitable medium. The present is an excellent time to insert the spawn in pastures, breaking it into lumps about the size of a hen's egg; then raise the turf with a spade and place a lump underneath, about 3 inches or 4 inches from the surface. It is important that the soil and turf be made thoroughly firm again by well treading or beating down with the back of a spade, otherwise the spawn will not run well into the surrounding soil, and is liable to fail entirely. The distance between the lumps of spawn may vary from 2 to 6 yards apart each way; if the field is specially adapted for Mushroom growing the latter distance will answer very well. When the spawn has once got established the field may be expected to yield Mushrooms for years afterwards if given a dressing of 3 cwt. of agricultural salt at the end of March or early in April. As to prices, they will vary from 1s. to 2s. per lb. according to the earliness of the crop, and the returns per acre will also be ruled to a great extent by seasons, as very dry or very wet, cold seasons may cause the profits to be practically nil. However, as the first cost in spawn is very small, comparatively speaking, it is worth while risking the outlay, as the returns might be of the most gratifying description. Personally I have had both good and bad results, but, on the whole, the investment has proved a very paying one.—W. G. C.

**Early Peas.**—These will be none too early this season. The early Peas are often planted on sloping, warm borders, and as we have had little rain to assist growth, it will be well to give moisture to plants that were raised under glass, as these soon suffer from drying winds and little moisture. I find the dwarf growers are much benefited by a light watering early in the day when the weather is warm. The plants should also get supplies of food at the roots in the way of liquid manure, or a good fertiliser used in a liquid state. Those who grow some of the second early varieties would do well to top them when

the haulm is from 2 feet to 3 feet high. I grow some of the 5-foot Peas and top at 2½ feet, with excellent results. The haulm branches out freely and there is a much heavier crop, and though the plants occupy about the same space as the dwarf kinds, there are much finer crops, which are nearly as early as in the case of the small growers.—S. H. B.

**Too many varieties of Potatoes.**—I was recently talking to a young gardener who told me that this season he had no less than forty varieties of Potatoes, and only six last year. I ventured to advise him to keep to the smaller number if they suited the soil and cropped well. A small selection grown in quantity is far better than a few of each, with no knowledge of their eating or keeping qualities. As soils vary so much and affect the quality, it is well to grow kinds which give the best results.—G.

**Variegated Kales.**—The collection of Kales in many colours impossible to describe sent by Messrs. Sutton to the meeting of the Royal Horticultural Society on April 23 was most instructive. These Kales are highly ornamental and if so many varieties can be staged after so severe a winter, it shows they must be very hardy. They belong to the Scotch section, the hardiest kind of Kale grown, and they answer two purposes, being good for decoration and for cooking, as when cooked they lose their colour and are equal to the green varieties. These Kales were highly commended by the society for their beautiful appearance and good keeping qualities. Early in May is a good time to get a stock for next winter; it is well to sow thinly and plant on open borders. The variegated varieties are not so strong-growing as the fine curled green varieties.—G. W.

**Seakale not forced.**—This is so often forced that a late or May supply is at times overlooked. Few vegetables are so easily grown as Seakale when the roots are only required for late cutting in the open ground. The chief difficulty is the blanching, as if not well covered, the tops soon force their way above the soil and become green. I get a valuable supply from the late roots covered with fine ashes to keep slugs away, and then banked up with soil. To do this it is necessary to have plenty of space between the rows. I usually cover with from 15 inches to 18 inches of leaves, which did duty the previous year in forcing Asparagus. The Seakale is grown close to the pits and is covered in December. Two-year-old roots are best, being stronger. The Kale produced in this way is delicious.—G.

**Coarse Salsify and Scorzonera.**—Many fail with these crops through too early sowing. From the end of April to May 10 is a suitable time to sow, and if room cannot be afforded for both these vegetables, I would advise the Salsify, sowing the improved variety, the Sandwich Island Mammoth. This is far superior to the older kind, producing clean straight roots much larger in size. The best Scorzonera is the new Large Russian, a very fine root of excellent flavour. These two vegetables are most valuable at the present date, when there is but a limited list to select from, and keeping so well into the spring makes them more valuable. They grow so quickly in warm soils, that if sown too early I have seen the whole crop lost by running to seed, and the roots fork so badly that they are not worth storage. This is readily prevented by late sowing on land which has borne a crop. If given manure when sown the roots are nearly useless, forked roots not keeping well.—W. S. M.

**Borecoles and their value.**—The great value of Borecoles in such a winter as we have recently experienced should make them greater favourites than ever, as in many gardens the Scotch and hardy varieties are the only vegetables left to give the supply for some weeks. The Borecoles have passed through the winter with less injury than any other green vegetable with the exception of Spinach, thus proving their hardiness. It may be suggested that those who have not lost their crops have been favoured in the way of less frost, but I do not think such is the case, much depend-

ing upon the state of the plants when put out, and, of course, to a certain extent upon variety and position of plants. I had 36" of frost, quite enough, one would think, to test the hardiness of any vegetable crop and most of the Scotch Kales, and such kinds as Buda or Asparagus, with Cottager's and the newer Arctic varieties, were uninjured. Sow very thinly on good land at any time from the end of April till well into May, as when raised too early the plants, when crowded, have not that dwarf hard growth which resists extremes of weather. For early supplies it is much better to transplant and thus promote a dwarf growth. Those with plenty of land at their disposal may with advantage sow seed very thinly at any time in May in drills 2 feet apart, thinning the plants to 18 inches in the row and planting out the thinnings thickly for the earliest cutting in the shape of dwarf greens. The Dwarf Green and Late Curled, with the varieties named above, are the best.—G.

**Fish manure for Asparagus in spring.**—Now is an excellent time to dress old beds with the above manure. I do not think any time of the year so good as May, and if we get dripping weather the fertiliser is washed down and acts at once. It may be thought that salt is equally efficacious, but it is not. I admit salt answers well on light soils, but with heavy rains or little sun the beds are kept so cold that it does not feed in the way fish manure does. On heavy soils salt may be given two months hence much better than at the present time; indeed, in my opinion, it is best applied then in any kind of soil.—W. S.

**Potato Sandringham.**—A gardener who annually aims at producing frame Potatoes at an extra early date recently informed me that the earliest variety for this purpose he had ever tried was Sandringham. Not only, added he, is it early, but it is a fine cropper, far superior in the latter respect to Sharpe's Victor, which only produces from four to six tubers at a root. I shall give Sandringham a trial next season, and it might be well for others needing early supplies to do the same, as my informant has had great experience in early Potato forcing.—J. C.

**Mushrooms.**—Those who have a house in an extra cool position will do well to use special care to prevent the young Mushrooms from turning black and becoming useless. Of course, no fire-heat must be used, but coolness must be further encouraged by throwing open all the ventilators at night, closing them again at daybreak. Apply tepid water to the beds as required and damp floors and walls daily. The Mushrooms should not be left on the beds a moment longer after they are fit for use, as they will keep much better if placed in a cool cellar or store house.

#### OPEN-AIR TOMATOES.

MANY err in sowing the seeds of plants intended for planting against outside walls too soon; consequently the plants become pot-bound and the wood hard long before the weather is fit for transplanting them. Where fear of this evil exists, it will be well to pot the plants on, as they will soon root round the balls, and may then safely be kept in frames or a cool house for another fortnight if need be. I have a small batch of plants brought on in advance of the main lot, and finally potted into, say, 10-inch pots with a view to sinking them into the border of a south wall. This in warm districts may be done at the end of this month, and if after the cavity has been taken out a good thickness of rotten manure is placed in the bottom and the hole in the pots made much larger, the roots will soon push through the bottom, and, taking advantage of the rich food provided, will grow away freely and fruit well. The pots should be sunk just below the ground level, so that a liberal mulch of short manure can be given in order to conserve the moisture and also to encourage surface roots. Bearing in mind the root-restriction this batch is subject to, water must always be supplied with a liberal hand, and when sufficient fruit is set, the leading growths must be

pinched, all side laterals being likewise kept off. Of course some method of protection must be devised, or cutting winds and even late frosts may cripple the plants. A very good plan is to put wide boards on either side of them and to place some Yew or Laurel boughs in front. These admit sufficient sun-heat and light, and yet screen the growth from harm. Those plants which are to form the principal batch for outdoor work, and which will not be planted out until the beginning of June, must be gradually hardened off in frames, being fully exposed on fine sunny days, as in the case of the above named lot. If any signs of exhaustion show themselves, a good surface dressing of loam and artificial manure must be given. It is well to prepare the stations under walls for Tomatoes some time before actual planting, so as to give them an opportunity of settling. There is then less fear of excessive evaporation, and the plants generally go away better than when put into newly-disturbed soil. When preparing, add a little good loamy soil and rotten manure, mixing it thoroughly and making it firm. I should here add that on the plants that are to be plunged a few fruits may set while in the frames. These should not be removed, as they will swell off in spite of the removal to an outdoor temperature, and, ripening extra early, prove most useful, especially where no indoor Tomatoes are grown.

J. C.

**Outdoor Mushroom beds.**—Some weeks ago I recommended those who need a constant supply to make up a bed in the open air to yield during the latter part of May and June. Where plenty of good horse manure is at command, now is a good time to commence, saving the material for a second open-air bed to afford Mushrooms during July, August, and September. As I stated before, where there is a difficulty in securing sufficient manure for a full-sized bed, a percentage of good Oak or Beech leaves and a few barrowloads of rough fibrous loamy soil may be added. In preparing it, care should be taken not to expose it to the action of the sun and wind, as these agents not only dry out the goodness, but necessitate the use of water at making-up time.—C.

**Summer Radishes.**—A north shady border or one partially sheltered by trees will grow the summer crop, but much may be done by selection of varieties, and by this means provide a long supply. For summer the Red and White Turnip varieties are good, also several of the olive-shaped kinds. For later sowing the China Rose is a very fine August and September variety, and for the months named may be sown on a border facing east. For later use the Black Spanish or Winter Radish is the best.—G. WYTHES.

**Potato Sharpe's Victor.**—I am not so sure that "J. C." (p. 284) is quite right in his estimate of Victor, as he says he thinks it requires a somewhat strong soil. This makes me think he cannot have the true variety. I have had two varieties, one much rounder and greatly inferior to the other, yielding about two large or medium-sized tubers with a mass of small worthless ones; whereas the true variety has a flattened oval tuber, is a good cropper, and is specially good for frame culture. I have been so successful with this variety, that I look upon it with special favour, its earliness combined with good flavour making it most valuable as a first early. I have grown Ringleader, but prefer Victor for forcing. I cannot see why Victor should fail on light soils. Our soil is on gravel, and the lightest I have ever had anything to do with, and Victor does well. Under field culture I saw this variety in splendid condition in Scotland in 1891.—G.

**Celery Man of Kent.**—This variety will keep sound well into May. The severe winter upset all our calculations as to a regular supply, and protecting large breadths was out of the question. I did not expect to see any living roots after the thaw, but the above variety and Standard-bearer were the only two sound varieties left, the Man of Kent being firm and very little decayed. It is not coarse, the colour bright red, the flavour very

sweet and nutty. It does well in poor land. The leaves are much cut. I did not sow till late, and therefore did not get large plants, but perhaps that was fortunate, smaller plants wintering best.—W.

#### VEGETABLE MARROWS.

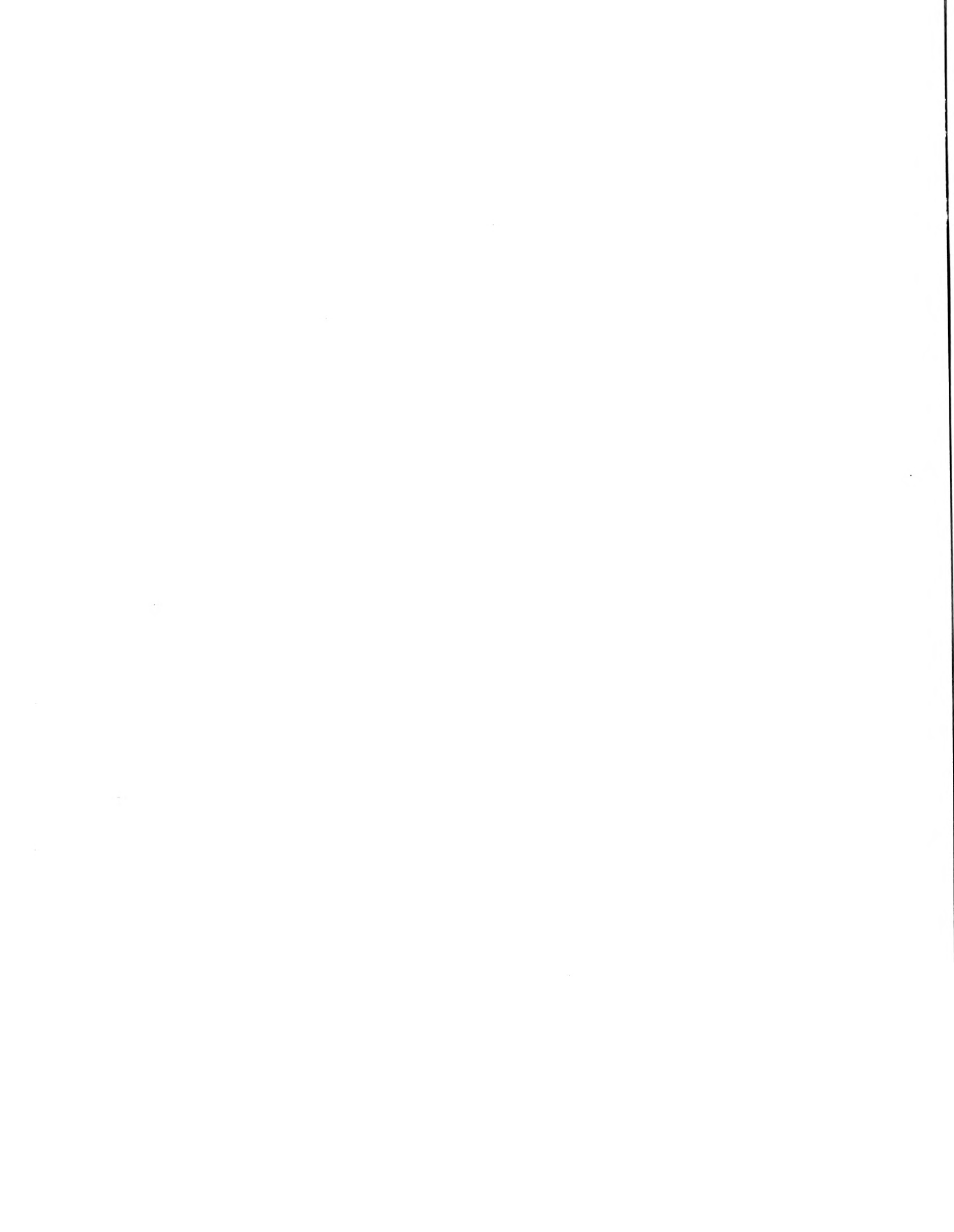
It is not in every garden that either room or time can be spared for the culture of extra early Marrows in frames on warm beds. There are few, however, who do not grow for a supply say at the end of July and through August and September. Where hand-lights are at command, also a good supply of leaves and short stable litter, I would advise taking out a trench, say 6 feet in width and 2 feet deep, and after well mixing and treading in the fermenting material, place the thrown-out soil on the surface, so that when all is finished the ridges will be a foot higher than the surrounding ground. Then place the hand-lights in position, allowing a distance of 6 feet between each, place therein a little fine semi-dry loam, and sow the seeds at once. As thinning can be practised to any extent after the plants are up, insert plenty of seed, and keep the tops on the lights till growth is seen, after which arrange them crossways on fine sunny days to admit air and strengthen the plants. A sharp eye must be kept for slugs and snails, as they very frequently abound in numbers in the leaves forming the bottom heat, and come forth at night to their destructive work. Prevention being better than cure, the surface soil amongst the seedlings should be freely dusted over with wood ashes and soot in equal parts once or twice a week until the plants grow out of harm's way. Some growers prefer a position partially shaded for Marrows, but, our summers being uncertain, the best position is a sunny one, mulehing being resorted to just as the plants are coming into bearing, should exceptional solar heat and absence of rain necessitate it. Where Marrows are grown minus bottom heat the seed should be sown in small pots, and the plants receive one good shift before finally transplanting them to the open beds. Bring them on from the start in a cool atmosphere—a greenhouse temperature is the best, and that of a frame for a fortnight previous to planting. In the meantime small mounds should be prepared by placing good loamy soil on the top of a few leaves. The addition of much manure is not advisable, as it often induces a rank growth prone to disease. The old plan of planting Marrows on the summit of manure heaps is not a good one by any means, as, independent of encouraging disease, which it certainly does, the flavour of the Marrows when cooked is often strong and objectionable. In addition to the ordinary varieties, the Custard Marrow may now be sown, this being preferred in some places before all others for the dining room. Ground vineries afford capital protection for transplanting Marrows, and amateurs and others who have no means of glass shelter must provide screens from cold winds by day by surrounding the plants with Spruce or Laurel boughs, and placing inverted flower-pots, buckets or baskets over them at night for the first fortnight. The third week in May is a good time for planting where only this partial shelter can be given.

J. CRAWFORD.

**Early Tomatoes.**—These will now be furnished with numerous clusters of fruit, the most forward of which will already be on the point of colouring. As, however, in most cases a good length of trellis has yet to be traversed by the leading shoot and a corresponding number of flower trusses has to form, great care in regard to watering, airing, training and fertilising will be necessary for some time to come. During dull, humid weather plants growing in heavy, old-fashioned houses are at a disadvantage, the trusses that form being weak, and in many cases the flowers fail to set well. Under such circumstances it is a great mistake to sprinkle floors and stages at any time of the day; rather let a gentle warmth circulate round the hot-water pipes and keep the

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ventilators both at the top and bottom of the house open half an inch. All side laterals must be removed as soon as formed, their retention being a double evil, first by robbing the main growth of sap, and secondly, by causing a check by being suddenly removed when of large size. Another cause of Tomatoes failing to set and, indeed, of becoming generally unhealthy is watering with water fresh from a cold well. This gives a check to the roots, and the whole plant is correspondingly affected. Where new roots show themselves on the surface of the balls, 1 inch of fresh compost should be given, but manurial mulchings should not be applied at present, or indeed until a full crop of fruit is set and swelling. The use of the syringe in Tomato culture is productive of much mischief, yet how many practise it daily. Some growers abandon the use of fire-heat at a certain date, say the first week in May, the result being that a low night temperature quickly induces mildew and all its attendant evils. Ripe fruits should if possible be gathered before they commence to crack, as if stored in any place in the least damp, mould sets in in a short time.

**Ellam's Early Cabbage.**—This has stood the severe winter well and is now turning in freely, not one plant in a hundred having run. I do not know of a hardier variety. I have plants in three sizes, and the same remarks apply to all. At one time I feared I had lost the larger plants, but though the large leaves were all destroyed, we have had such genial weather and growth has been so rapid, that the plants have made wonderful progress and well repaid for any extra attention given them in the way of liquid manure or guano. This is not a good Cabbage for spring sowing.—G. W.

## GARDEN FLORA.

### PLATE 1014

#### ACIDANTHERAS.

(WITH A COLOURED PLATE OF A. BICOLOR.\*)

There are in all about seventeen species of *Acidantha* known to botanists, but only one besides the species here figured has been introduced to cultivation. The genus is purely African, and the species are represented most abundantly in Cape Colony, although outlying species occur as far apart as the mountains of Abyssinia, Sierra Leone, Kilimanjaro Mountain, &c. It is from these warmer, more northerly regions that the two cultivated species come, but in each case at several thousand feet altitude. The *Acidanthras* belong to the Iris family, and form a connecting link between *Gladiolus* and *Ixia*.

The species represented in the accompanying plate is a native of Abyssinia, where it was collected by Dr. Schimper, and described as long ago as 1844. It is of similar habit to a *Gladiolus*, and produces long arching leaves in two opposite rows from a roundish flattened corm, which is covered with matted fibre. The flowers, somewhat loosely borne on a spike 2 feet to 3 feet high, are pendulous. The perianth has a tube 4 inches to 5 inches long divided at the top into six segments, which are about 1½ inches in length and overlap each other. The flower is creamy white, with a broad, somewhat triangular patch of purple at the base of each segment, and is delightfully perfumed, more especially towards the latter part of the day. This plant has flowered at Kew on several occasions and is grown there in an unheated frame, planted in loam and silver

\* Drawn for THE GARDEN in the Royal Gardens, Kew, by H. G. Moon, July 12, 1894. Lithographed and printed by Guillaume Severeys.

sand. According to *Garden and Forest*, it is in the neighbourhood of New York grown in tubs, which are stood out-of-doors in summer, being taken indoors for autumn flowering. The other species in cultivation,

*A. EQUINOCTIALIS*, is one of more tropical character. It is a native of the Sugar-loaf Mountain, in Sierra Leone, where it was discovered by Mr. Scott-Elliott. Corms collected by Captain Donovan reached Kew about two years ago. It is described as growing "in the crevices of bare gneiss rocks in open spaces in the bush at 3000 feet altitude." It is nearly allied to the species here figured, and may possibly be a stronger-growing, more tropical form of that plant; it is, indeed, the finest of all the known *Acidanthras* both in its stature and in its flowers. Although it was only brought to the notice of the present generation of gardeners as lately as 1893, it appears to have been known forty or fifty years ago to Dean Herbert either as a cultivated plant or in a dried state, for there is in the Lindley Library an unpublished drawing of it made by him. It flowered at Kew towards the end of 1893, and has recently been figured in the *Botanical Magazine*, t. 7393. The stems are 4 feet in height, the sword-shaped leaves being 18 inches, sometimes more, in length. The flowers, as in *A. bicolor*, are borne loosely, and about half-a-dozen occur on the spike. The tube of the perianth is 6 inches long and the expanded portion 3 inches in diameter, with a crimson blotch at the base of each segment. This species requires considerably warmer treatment than *A. bicolor*, and has at Kew been found to succeed best as an intermediate stove plant. W. J. B.

## THE WEEK'S WORK.

### KITCHEN GARDEN.

**SOWING RUNNER BEANS IN THE OPEN.**—For those who require extra early pickings of Scarlet Runners I advised sowing some seed in boxes or pots and placing in warmth till up, the same being transplanted after due hardening. Now, however, in all gardens and soils the seed may be put into the open ground. It must be borne in mind that this section is very prone to decay if deep sowing is practised; 3 inches is quite deep enough for the drills, and on strong retentive soils a little artificial compost should be placed in them previous to sowing, and the drills finally filled up with the same. Allow plenty of room between the rows; where ground is plentiful from 9 feet to 10 feet is none too much. To make the most of the crop, tall, slender poles 12 feet high may be used, as the higher the haulm ascends the better the yield, and the crop can be gathered by the aid of steps. Where ordinary Pea rods are employed the growth when healthy often outgrows these supports, and, falling down, forms a complete thicket, into which neither air nor sun can penetrate; consequently the gatherings are very unsatisfactory. It is astonishing for what a length of time Runner Beans can be kept in a bearing state by allowing plenty of room in all directions and by keeping the pods from becoming old, and thus distressing the plants. Nothing pays better for good mulchings of rich manure followed by copious watering with farmyard liquid. Especially is this needful when many small pods and numerous bloom-trusses have formed. When sowing, always provide for possible blanks in the rows by sowing small patches of seed here and there at the ends of the quarters. Beware of slugs and snails, as I know of nothing in the kitchen garden more cherished by these pests than Scarlet Runners.

**JERUSALEM ARTICHOKE.**—If planted at the time advised these will now be advancing rapidly, and, as in the case of Potatoes, several growths

often issue from one tuber, due thinning of these is necessary. Go over the bed and reduce them to one for every 9 inches or a foot. If the Dutch hoe is now put through the rows, weeds will be destroyed in their infancy, and once the Artichokes make a foot of growth, weeds will stand but little chance of thriving amongst them. Artichokes are often planted in out-of-the-way corners where, being out of sight, they are out of mind, and weeds are often allowed to smother the plants in their infancy.

**SPINACH.**—From now onwards all sowings which may well be made fortnightly will do best in a cool border under an east or even a north wall. Here Spinach not only does better, but lasts much longer in usable condition than when exposed to the sun. Use the large-leaved *Victoria*, this being more robust for hot weather and more juicy and highly flavoured. Spinach responds quickly to an application of artificial manure, and if this can be given in showery weather, so much the better. It is a good plan to put it on the surface just after the first general picking has been made; the secondary growth is thereby improved, and running to seed hastily prevented. Allow plenty of room between the rows, and thin out the plants to 9 inches apart when the first pair of rough leaves have been made. Earlier beds now exhausted should be cleared off without delay, as, besides impoverishing the soil, the rain is kept from penetrating the surface.

**PLANTING SPRING ONIONS.**—Where seed of any special variety for producing large exhibition bulbs was sown early in February, and the plants have been treated according to advice given from time to time, planting out into the final rows may now take place. Presuming the ground was extra well manured and has lain for some time, all that is necessary is a thorough treading and raking of the surface. Water the young plants well the day before planting and remove them carefully with the point of a label, preserving all roots intact. In planting do not use a dibble, but a small hand fork, making cavities sufficiently large to admit all the roots, which should be spread out like the extended fingers of a man's hand, a little soil being placed over them to keep them in position till planting is completed, when a little more may be added and the surface made very firm. If the soil is at all light and fully exposed to the sun, as it ought to be, mulching will be necessary when the Onions get into full growth, and frequent broadcast sprinklings of soot should be given to keep away the Onion maggot. Liquid manure of good strength will also be necessary if large heavy bulbs are expected.

**THINNING SPRING ONIONS.**—Where the seed of Spanish and other early varieties was got in in good time, thinning will now be necessary. I do not, however, advise giving the final thinning just yet, as sometimes after cold rains the seedlings die off in great numbers. On the other hand, if thinning is deferred till the Onions are 4 inches or 5 inches high, the whole of the ground is loosened to such an extent, that those left fall about in all directions, and never do so well as when erect and firm. Rather than snap them off by pulling, use a pointed stick, with this giving a gentle leverage. Partial thinning completed, run the Dutch hoe through the rows and give a dressing of soot, as advised for the planted-out ones. The final thinning may take place in about three weeks' time. Where the small silver-skinned varieties are in request for pickling, the present is a good time to sow them. When up, thin only slightly, as they are sure to grow large enough by September.

**PARSNIPS.**—The earliest rows now require thinning, and with these also moderation at first is advisable, as cold winds may bring fly, which soon distigures the rows if not detected at once.

**LETTUCE.**—From now till earthing Celery commences there is no better place for growing Lettuce than the spaces between the trenches. Draw out slight drills the day before and water them well; the young tender rootlets then go into moisture at once, and go away quicker and better than when planted into dry soil and not watered

for some time after. For fortnightly sowings from now until September the Alexandria Cos is unsurpassed, and for those who require a good Cabbage variety I cannot name a better than Daniels' Continuity. One advantage this Lettuce has over all other Cabbage varieties is its non-liability to run to seed. Its firmness and quality generally also are very conspicuous.

**EARLY BROAD BEANS.**—Where these were planted out of pots and boxes and are now from 1 foot to 18 inches high, they may in exposed gardens fall victims to black fly. Immediately this pest is detected the points of the shoots should be dusted with tobacco powder and afterwards syringed with clean water. If this precaution is not taken, growth may be altogether suspended and the crop lost. A little soil should also be drawn up to the stems on either side of the row, and in the case of single rows, a few branches placed at intervals close up to the Beans and in a slanting position will keep them from falling about.

**SEED BEETROOT.**—Roots planted in March are now growing freely. If the centre growths are intact, all side growths must be removed, but where the crown growth died back in winter three side growths only should be selected. As soon as 1 foot high, stout stakes must be placed to each root and the growths tied to them at intervals. The same attention must be given to seed Onions, or winds will be liable to snap off the growths. J. CRAWFORD.

#### HARDY FRUITS.

**APRICOTS.**—These will claim first attention, and I regret to observe they have not passed through the winter as well as one could wish. Many trees show more decayed wood than usual, some of the centre branches having failed to break freely. These should now be removed. The shoots should be regulated as much as possible to fill up these gaps, and thinning of the fruit should be proceeded with. It is not wise to defer thinning, as even at this early date it is soon seen which will take the lead. Those who can lay in plenty of wood of each season's growth will find the trees are less troubled with disease, as young wood induces the formation of roots, which if kept near the surface by supplies of food in the way of moisture and liquid manure will furnish good crops and wood to replace that which decays. In thinning the fruits it is well to pay attention to useless growths, and by stopping throw the sap in the direction required. The roots should be examined, and if at all dry, water should be given. I am aware it is rather too early to advise watering, but much depends upon the state of the soil and the position of the trees. I have in a light soil found it necessary to water, and shall shortly mulch with short manure, the trees being much exposed and on a sloping bank with a gravelly subsoil. Of course, trees in better soil with ample depth will need less moisture, and the mulching may be deferred for a time.

**PEACHES AND NECTARINES.**—These, except in very late districts, should now be freely exposed. Disbudding will now need almost daily attention. I find it best to go over a portion of the trees daily. Disbudding is very soon understood after a little practice, and may be done by anyone interested in the work. So far the trees are remarkably healthy, and in this district have set very heavy crops. The weather having been most favourable very little protection was needed. In disbudding it is well to bear in mind the age of the tree, the number of fruit it will be allowed to mature, and other details. Do not crowd the wood in any way, but concentrate the energies of the tree to the growths required for extension and to produce fruiting wood next season. It often happens that some of the finest fruits set close to the nails and are injured if these are not removed. Shoots with fruit at the base should not be entirely removed, but pinched at the fourth leaf from the base. In disbudding, sufficient shoots should be left to furnish blanks on the wall. Any branches that show signs of canker or decay

should be removed, as these will not thrive, and it is an easy matter now to fill up any blank spaces with new growths. It is well to remove the superabundant fruits as early as possible. This can be done when regulating the shoots. The American varieties advance so rapidly up to the stoning period, that if thinning is at all delayed the trees soon suffer, the fruits drop, and what are saved are not the best. Should green-fly attack the young growths, it is well to syringe freely with weak tobacco water, or, what is better, give daily syringings with clear water, only using the tobacco for badly infested trees, and then a weak solution, as insecticides at these early stages of growth are not advisable. Some varieties mildew badly. As this pest spreads rapidly, it is well to use flowers of sulphur freely over the affected parts, keeping the foliage dry for a short time afterwards.

**CHERRIES** have set splendidly. They require much the same treatment as Apricots as regards mulching and moisture. The roots being close to the surface and the fruits soon stoning require much moisture at this stage, dryness at the roots being the forerunner of black-fly, a pest difficult to dislodge. It is scarcely necessary to remark that thinning is not required at this stage, as so many fruits drop before they stone. Many trees get crippled by crowded growth. All foreright shoots should be removed as early as possible, but should the cultivator require fruit from spurs on the main branches, it is best to select the side growths. These, being closer to the wall, get more protection, and at this date should be stopped freely for the purpose named, rubbing off any prominent forerights or shoots not required for the extension of the trees, as the more these can be encouraged the better, if wall space permits of extension. Cherries on light soils will repay an early mulch. I find cow manure in a light gravelly soil very good, and if at all fresh it is mixed with spent Mushroom manure, and thus keeps the roots from becoming dried up. Such kinds as Early Rivers, Frogmore Bigarreau and Governor Wood mature so quickly, that there should be as little delay as possible in mulching, syringing freely during the next few weeks to prevent aphides and assist the swelling of the fruits.

**PLUMS ON WALLS.**—These trees in some soils soon lose the bright, fresh appearance they have at this date, and become a prey to aphides. In such soils early mulching and frequent syringings are necessary, and the stopping of useless growth and the removal of foreright and crowded shoots should claim attention. The Plum brought on slowly under glass grows much like other fruits, showing that where due attention is paid to the wood there is a good return. Lay in plenty of fruiting wood for the next season, as much of the bearing wood may be cut away after the fruit is gathered. I have stated that the trees soon get sadly disfigured by aphids, and as this occurs at a busy season, it is well to be supplied with materials that will effect a speedy removal. I find quassia extract one of the best and safest insecticides. It does not injure the fruit, and is of special value for Plums and Cherries, but should not be used when the fruit is colouring.

**CORDON APPLES AND PEARS.**—The lateral growth of cordon trees should be stopped now while it is tender. It is far better to use the finger and thumb freely than the knife later on. Many useless shoots may be rubbed clean off, others pinched to form spurs, and the main or best leading shoot should be selected to form the leader. Young trees are this season showing much bloom, and it may be necessary a little later to thin severely. I am aware that Pears often shed their fruits badly in their early stages, but it often occurs owing to the trees being so heavily laden that the roots cannot find food for the same.

**NEWLY-PLANTED FRUIT TREES.**—In some districts trees were planted late owing to the severe weather, and will thus need more than ordinary care. An early mulch of short manure with occasional supplies of water should be given to these. It is also necessary to give the autumn-planted

trees the necessary moisture, as owing to the protracted frost the trees are unable to bear extremes of any kind. From such it will be well to remove the bloom, as it tends to weaken the trees. Against walls newly-planted trees such as Peaches and Nectarines were longer than usual in breaking, and on dry soils will be benefited if syringed over frequently. If the trees break too freely in one place reduce the shoots as soon as possible, so as to get the foundation of the tree laid and fairly started. Remove useless shoots at the base first and pull out foreright shoots at the earliest moment to induce stouter side growths, which are required for training or nailing in. Trees of the varieties named which are of fair size and inclined to make vigorous growth should be allowed to carry a light crop of fruit in order to check grossness.

**RASPBERRIES** have suffered severely. The hot summer of 1893 was not a favourable one for these, and the plants had only just got into condition, having made a late sappy growth, which was cut down by the arctic weather in February. Much may be done to help the canes by cutting down to a live portion any that are badly crippled, only allowing four to six growths from the base. The usual practice is to allow more and to thin to the number named after the fruit is gathered. Raspberries will now require to be mulched if the soil is light, and good manure should be used for the purpose. Newly planted canes that are breaking badly or only at the top should be cut down to within 6 inches of the soil and new growth from the base encouraged.

**STRAWBERRIES.**—These started very feebly, and are not nearly so well furnished with bloom-trusses as usual. This need not cause any alarm as to the crop, as a certain number of fruits well developed are preferable to a mass of small ones. Last season the early fruits got a severe check by frost at the end of this month. Though Strawberries will be later this season, it is well to be prepared for emergencies. Such a material as litter in a dry state is of great assistance to ward off frost, and as only limited areas can be covered, it is well to select the most promising or young plants. The mulching of the plants will now require attention. A double use may be made of the mulch. If the mulch is straw manure, the straw will be cleansed by heavy rains and ready for the fruit. It may also be turned to good account on frosty nights by lightly covering the bloom if lifted lightly with a fork. Before applying any mulch, hoe lightly between the rows, doing the work in bright weather. Apply food if necessary in the way of liquid manure, soot, or other fertilisers, but be careful to keep them clear of the plants. Young plants wanted to produce runners for forcing should have the flower-trusses removed to induce the formation of runners.

G. WYTHES.

#### TREES AND SHRUBS.

##### RHODODENDRONS AND THE FROST.

It often surprises me that the Pontic Rhododendron is so largely planted in gardens when many of the choice named varieties, hybrids of the much hardier and more vigorous catawbiense, are, to my mind, incomparably more beautiful. Out of one hundred and one different varieties in my garden I have lost remarkably few during the severe frost, although my position is rather low, and we had the frost in the near neighbourhood down to zero for several nights consecutively. Those that show signs of the severest punishment are mostly plants moved in the autumn, which possibly had not got well hold of the soil before the frost came. Baron Schröder, Odorum, Sun of Austerlitz, Broughtoni, and some choice unnamed seedlings from Loquendum, with long finger-like leaves, have been the hardest hit, but, so far as I can judge, more than ninety varieties out of the one hundred and one are practically uninjured, whilst the Laurel, the Privet, and some of the varieties of

Berberis are either killed outright or greatly damaged, forming a terrible eyesore in their present condition. It is, therefore, clearly demonstrated that the "queen of flowering shrubs," the Rhododendron, is far preferable as a hardy evergreen for our English climate than the uninteresting and apparently inevitable Laurel and Privet. As a fine foliaged plant the Rhododendron presents as much beauty, if the right sorts be selected with that object in view. Take the foliage, for instance, of such varieties as Joseph Whitworth, Charles Dickens, Lord Palmerston, Mrs. John Waterer, William Cowper, Sir Thomas Sebright, James Mackintosh, and Everestianum; it is beautiful all the year round, but add to this the blaze of colour of the choicest varieties when in bloom, it is amazing that the hardy Rhododendron is not more extensively planted. To those who may be interested in procuring a few of the very grandest varieties of hardy Rhododendrons—whether new or old—in cultivation, and who do not care to wade through nurserymen's bewildering catalogues, I would suggest a trial of the following twenty kinds as almost certain to give satisfaction in their respective colours if properly planted and attended to. If the former is well done, they do not require much of the latter, beyond well watering and syringing just when they are coming into bloom. Baroness L. de Rothschild, superb conical truss, brilliant scarlet, with lighter throat; Mrs. John Penn, salmon-pink edges, with waxy cream centre; Helen Waterer, white centre, with most brilliant scarlet edge; Kate Waterer, rose-crimson, with yellow centre; Lady Eleanor Cathcart, salmon-pink, finely-marked, very beautiful, but shy bloomer; Mrs. R. S. Holford, superb truss, salmon-pink; H. W. Sargent, dark velvety crimson; James Mackintosh, rich velvety crimson, fine truss, and splendid foliage; Michael Waterer, an old favourite, bright scarlet, rather poor foliage; Marchioness of Lansdowne, light red, intense maroon blotch, very fine flower; Marie Stuart, lovely shade of rose-lilac, with intense purple blotch, splendid truss and habit, flowers as beautiful as an Orchid; The Queen, one of the most beautiful whites; Lady Grey Egerton, purely white, magnificent truss; Sir T. Sebright, metallic bronzy purple, free and long bloomer; Joseph Whitworth, dark maroon, beautiful flower and foliage; Martin Hope Sutton, brilliant dark scarlet—if perfectly hardy, one of the finest in cultivation; James Marshall Brooks, scarlet, with a curious mossy bronze eye; Broughton (or Lord Palmerston), very similar, but not synonymous, grand trusses, bright pink, fine foliage; Frederick Waterer (or John Walter), different habit and foliage, but very similar flowers, bright scarlet, perfect trusses; Sigismund Rucker, rich magenta-crimson, with a black intense blotch. It would be easy to add twenty more almost as good as the foregoing, but it would be hard to name twenty better. When varieties such as those enumerated cost very little more than the ordinary ponticum, it is strange that they are not more extensively planted.—GEORGE BENNINGTON, *Bush Hill Park, Enfield, in Field.*

**Spring flowering shrubs at Scilly.** Although spring is certainly not the period of the year when the gardens of Tresco Abbey, in the Isles of Scilly, show their greatest beauty, the evidences of the equable climate are, perhaps, more apparent at that time, especially after the bitter winter experienced on the mainland, than later in the season. On April 15 *Edwardia macrophylla*, grown almost to tree size, was covered with its pendulous yellow flowers. *Cordyline indivisa*, not the *Cordyline indivisa* generally held to be identical with *Dracena indivisa*, but a species having sword-shaped leaves 4 inches broad, was flowering for the first time, the cluster hanging by the side of the stem after the manner of the bunch of a fruiting Banana, the individual flower-spikes, which are numerous and finger-shaped, being of a yellow and bluish-black colour. *Senecio Fosteri*, in large bushes 12 feet high, in profuse flower was a striking sight, while the fol-

lowing shrubs were also in bloom: *Boronia tetrandra*, *B. heterophylla*, *Pimelea decussata*, and several *Correas*, of which *C. cardinalis* had been blooming throughout the winter, *Banksia serratifolia*, *Eriostemum buxifolium*, *Anopteria glandulosa* and the Tasmanian Peppercorn, the scarlet Thistle (*Erythrolena conspiciua*) also showing many heads of brilliant flowers. *Berberis Darwini*, the white Broom and *Polygala*, as well as various *Rhododendrons* and Australian *Wattles* also brightened the gardens. *Fourcroya longava*, of which there are a large number at Tresco, had started throwing up its gigantic flower-spikes, one of the latter having in former years reached the height of 25 feet. On garden flowers in bloom I will not touch, except to say that a very beautiful effect was afforded by masses of *Lithospermum prostratum*, which, covered with their Gentian-blue flowers, informally outlined the verge of a border. *Muhlenbeckia complexa* flourishes like a weed in the gardens, garlanding trees with its graceful festoons and covering a hedge 10 feet high with its wiry stems and minute foliage. The Abbey gardens have suffered but little from the effects of the past winter (the greatest amount of frost registered being 5°), which has left a very different legacy to that of the disastrous winter of 1893-94, when several of the giant Tree Ferns were lost, as well as a splendid specimen of *Seaforthia elegans*.—S. W. F.

**Rhododendron (Azalea) rhombicum.**—This is the earliest of all the hardy deciduous Azaleas to come into flower, and is, moreover, one of the most distinct of that beautiful family. Although it is perfectly hardy and has come through the past winter quite unscathed, it is tender when young, a fact which probably explains its rarity in this country. The flowers are produced most abundantly over the bush before any of the leaves appear, the corolla being of a bright rosy-purple shade which is quite different from that of any other hardy Azalea. An example about 4 feet high in the Azalea ground at Kew is now very prettily in flower. The leaves, somewhat diamond-shaped and pointed at both ends, are covered with silky hairs when young. This species is a native of Japan, where, on the island of Nippon, it is said to inhabit the mountain forests. To those who are interested in early spring flowering shrubs it is well worthy of attention.—B.

**The Box as a specimen shrub.**—The assertion in a recent issue that the common Box is a much abused subject is, I think, quite justifiable. How seldom do we see it planted by itself where it can spread and develop to the fullest. Few, I think, have any idea to what proportions this shrub in good ground will attain. Some of the finest specimens I have ever seen are at Gunton, growing in the pleasure grounds. They stand quite clear of the neighbouring shrubs, and have plenty of air and light, and are most useful and handsome. The variegated forms appear to be more stiff and erect in growth, and not nearly so graceful as the common variety. Were I planting new pleasure grounds I would certainly accord the Box a prominent place amongst shrubs and give it plenty of room.—J. CRAWFORD.

**Protection of tender trees.**—Exposure to cold winds and draughts—in other words, want of consideration in planting—has more to answer for in the destruction of plant-life than even an exceptional amount of cold such as we have had during this last winter. In a garden in this village there is a specimen of *Eriobotrya japonica* now (April 30) looking the picture of health. It is 18 feet high, and the leaves are 16 to 17 inches long by 5 to 6 inches broad. It is in a thicket of shrubs, deciduous and evergreen, most of which are considerably taller, and is thus well protected. In the same garden is a plant of *Embothrium coccineum*, growing close to a small pond (in which *Aponogeton* is blooming freely); it is 8 feet high, and has a truss of flower buds on every branch. The open space in which it grows is nearly surrounded by trees and shrubs somewhat taller, and this amount of protection has enabled it to

bear at least 13° of frost with impunity.—W. T., *Bishopsteignton, South Devon.*

**Andromeda formosa.**—In common with many others, I could not find the specimen of *Andromeda formosa* to which an award of merit was given at the meeting of the Royal Horticultural Society on April 23, but at all events there seems to be a mistake made in thus recognising this decidedly ornamental shrub, for the genus *Andromeda* is closely allied to *Pieris* (indeed the names are often used indiscriminately), and last year at the meeting held on May 8 specimens of *Pieris formosa* were sent from Glasnevin, and an award of merit was then given. Surely this must have been overlooked, for merely a change in the generic name should not entitle a plant to be again recognised. This *Pieris* (for according to the "Dictionary of Gardening" *Pieris* is the correct generic name) is a native of Nepal and was introduced in 1881.—T.

## ORCHARD AND FRUIT GARDEN.

### THE FRUIT CROP.

It seems to be universally admitted that a grand crop of hardy fruit is this year inevitable, as never had we brighter prospects, a finer bloom, or more perfect weather to bring about its fertilisation. In but a week or two all will be over, as it is already with Plums and Cherries and many Pears, and on these, in spite of prevalent east winds, there is a fine set. A grand fruit crop may not prove to be to all an unmitigated blessing. That it will help to make the nation several millions of pounds richer there can be no doubt, but the distribution of that huge sum is not always properly arranged, for whilst some growers get a good share others get little or none—not because their products do not merit reward perhaps, but because local or other circumstances too often interpose to check profitable sales. Whilst between now and the autumn, when the bulk of the huge fruit crop will be gathered in, there may be some cause for battling with ordinary troubles, yet the ultimate outcome seems so far assured, that it is well even thus early to put the question, "How shall we most profitably utilise it?" It is very certain that should all go as anticipated, we must look for some two or three rather lean fruit years to follow, because that seems to be all in the course of Nature. That fact furnishes an additional reason, if one be needed, why we should thus early consider the best means of utilising this great fruit crop. A few who know how to market will do so satisfactorily. The many who do not know will find their fruit a drug and the market glutted. When such is the case, the moral derivable from a grand fruit crop is entirely discounted, because so much is heard of unprofitable sales, of great waste, and of consequent disappointment.

At the present time there is no question associated with home fruit culture so important as is the one, "How most profitably to market our produce?" We must, of course, entirely change our existing methods of getting fruit to market or into shops. Thus when the fruit harvesting comes we shall see the old rough, crude methods, the same crowding of certain markets, to the exclusion of others, the same imperfect packing and lack of sorting, the same evils repeated again and again, with the inevitable result that gluts are produced. We may expect the jam manufacturer to be strongly in evidence, and he will take for his purposes enormous quantities of fruit, but as he purchases at who esale rates, his prices do not admit of much profit. It is not in the direction

of jam manufacture by a long way that we must look for the highest uses to which good fruit can be put. It is in the home circle, used either as dessert food or as elements for sweets and sauces or as stewed dishes, that we must seek for that greater development of consumption which is so much needed. Why not gather the fruit with more care, assort it according to quality, pack into neat cheap non-returnable boxes, in quantities of 8 lbs., 10 lbs., 12 lbs., 15 lbs., or 20 lbs., to meet all requirements, the lids being easily secured and removed, whilst smartness and taste are presented in the packing, and thus open a wide connection with the grocers' shops and stores for several miles round? The assumption that only through certain markets and eventually greengrocers is it that legitimate fruit-trading can be done is a tradition that cannot be too soon destroyed. In many rural districts where small areas of fruit are numerous some collecting and distributing agencies could render most efficient service. No doubt we are, and in spite of all that has been written and said during the past twenty years, still growing far too much of inferior fruit, or our cultural methods are still such that only inferior samples result. It is too often the case that growers of market fruit depute the gathering of it to careless or untrained persons. In a private garden there is no work which commands the head gardener's personal attention more keenly than does fruit gathering. The untrained hand has no faculty for selecting the fittest, and in the process of gathering rarely does so with ordinary care. The subject here referred to is a most important one, meriting the fullest discussion, and such attention bestowed thus early in the year should have far more practical results than if deferred until the fruit harvest is here. A. D.

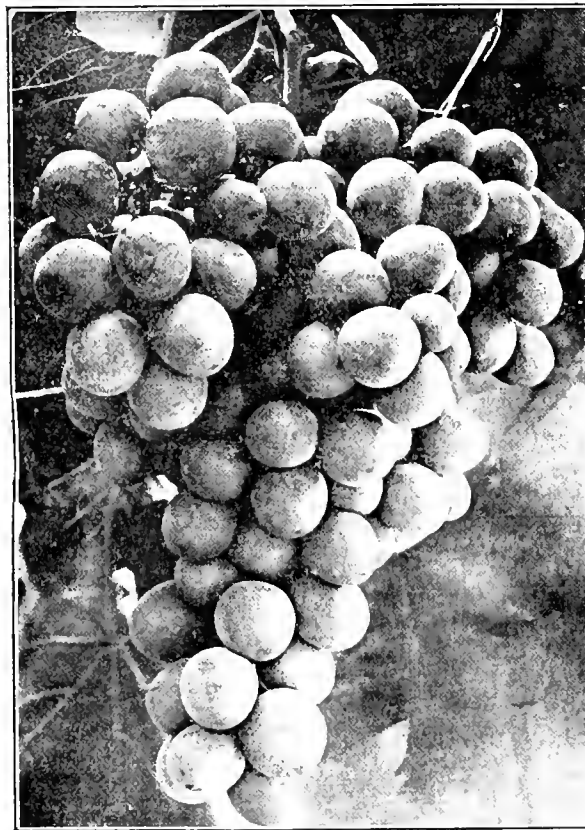
**Wasps.**—Judging by the immense quantities of queen wasps daily flying about, there will be no dearth of these enemies to fruit during the coming summer; and although we may kill all that we possibly can, more than enough will be left to work destruction. At the same time the deeds of the wasp are not altogether evil, as the queen wasps can be seen searching fruit and other trees in search of aphids, which they devour eagerly. *Psylla mali* also finds favour, as I watched them eating the newly-hatched psylla on several occasions recently; but the good deeds do not compensate for the havoc they work, and I destroy every wasp that I can, as aphides, psylla and other insects of that description can be easily got rid of by the aid of the reliable insecticides in the market, without depending upon such doubtful friends as wasps.—W. G. C.

**New Strawberries.**—I have recently had good opportunities of testing the quality of three new Strawberries ripened under glass. One of them (Royal Sovereign) is now very generally distributed, and many gardeners will have tried it this season in pots either for the first or second time. According to my experience this variety is a decided acquisition to the somewhat meagre list of forcing Strawberries. The plants under ordinary cultivation attain a great size, forming exceptionally fine crowns, and are just what a grower feels proud of. Very hard forcing is not advisable, but if included in the third or fourth batch of plants introduced into heat no mistake will have been made. In some gardens that I have visited highly creditable crops were ripe and ripening about the middle of April, the fruit I tasted being of excellent quality. Some that were sent me by post from a considerable distance travelled well, and such fine, bright-coloured fruit would early in May have fetched from 5s. to 6s. per pound in the best markets. Very large fruits are apt to become slightly hollow, but the handsomer, moderately large fruit do not show this failing, while the flesh in every case is firm and richly flavoured. Monarch,

another of Laxton's seedlings, will not, I fear, become popular as a forcing variety, as it does not set well in heat, but it will probably make its mark in the open and may succeed as a late crop in pots. It is of a distinct, sturdy habit of growth, the fruit large, handsome, and deliciously flavoured. Seeing that Latest of All is one of its parents, lateness may reasonably be anticipated. Laxton's Leader, however, can be forced, and this very fine Strawberry must eventually become popular. I saw it in Laxton's Bedford trial grounds last summer and was much impressed by its appearance and the rich, pleasing flavour of its fruit. Ripened under glass this excellence of flavour is even more evident, and very superior to what is often attained in the case of other varieties under pot culture.—W. IGULDEN.

#### BLACK HAMBURGH GRAPE.

THOUGH this is beyond question the most popular black Grape, it will be admitted by veteran growers that it is not so well grown now as it was



*Grape Black Hamburgh.*

formerly. Many will remember the grand examples that were exhibited at some of the leading shows about twenty years ago, but which are seldom, if ever, equalled now. It is not an easy matter to state why Black Hamburgh is less skilfully grown, as there is no doubt more than one cause for the degeneration. As mentioned in THE GARDEN a few weeks ago, I think the present system of feeding is unsuitable for the variety, as it cannot take up the copious supplies of food supplied to the roots; this is followed by a surfeit, and instead of doing service to the Vines, injury is inflicted, followed by small and frequently badly coloured berries, also smaller bunches than we used to see. On the old system of growing Black Hamburgh the border was well made with sound fibrous loam, with abundance of lime rubble and per-

fect drainage, and very often the borders were entirely outside, the Vines being brought through the wall into theinery. Afterwards very little manuring was done beyond a mulch of the best farmyard manure procurable every spring, and an occasional application of fresh lime lightly forked into the border. Considering how largely lime enters into the composition of the berries and the stones therein, it may be that some of the chemical manures now employed as a substitute for this do not answer so well as expected, more particularly on soils naturally deficient in lime. A manure that most Grape Vines enjoy is fresh guano. As a change from other stimulants it acts splendidly, and if anything is required to assist healthy Vines of Black Hamburgh, I can recommend the manure mentioned. For supplying a gentleman's table no black variety is more generally appreciated, as it possesses excellent quality, good appearance when well grown, and can be had in good condition from May to

December. With a little extra trouble good bunches may be kept until Christmas, but to obtain these, the Vines should be allowed to start naturally, and not be hurried too much by early closing during the summer months, and giving ample room for the development of the berries. Any jamming of the berries will be fatal to the bunches keeping, as decay would set in and the whole become tainted in a very short time. There is a host of so-called varieties of Hamburgh, including Frankenthal, but my experience is that there are only two really distinct varieties, and these are only distinct in the size and shape of the bunch. The better variety has fine broad shoulders, forming a bunch as wide as it is long, but still of good shape; the other has a more tapering bunch, with somewhat narrow shoulders, and under the best cultivation will never produce such a large and heavy bunch as the former.

W. G. C.

#### RUST ON GRAPES.

Most gardeners look upon rust on their Grapes as something to their discredit, and are always anxious to avoid this disfigurement if possible. There are many causes of rust on Grapes, but one of the most general, I believe, is injudicious ventilation, more especially up to the end of May. During this month we have hot days, but often a cold wind blowing that is felt by the tender foliage and berries of Vines, as proved by rust appearing on the latter, and frequently mildew on the former. So injurious is front ventilation to Vines in May, in my opinion, that I never have the front lights opened until the month is out, and experience has proved that the plan is sound. It may be asked, "How do you prevent the temperature becoming too high?" The answer is, by early top-ventilation. Immediately the thermometer rises to 70° a chink of air is admitted at the top, and gradually increased as the temperature rises, with an occasional damping down of the floors, walls, &c. By this means the thermometer never rises beyond a safe height. Where a mistake is made is in not commencing to ventilate early enough, then the air in the house becomes very heated early in the day, and if the sun continues

powerful all day it is very difficult to keep the heat within bounds without the aid of front ventilation and its evils.

Another cause of rust is the heavy removal of sub-laterals. Mr. Douglas mentioned this matter in a recent issue, and I agree with all he then stated on the bad effects of this severe mode of stopping Vines. In addition to the check given to healthy growth a sudden access of light is usually thrown upon the bunches, and the berries being accustomed to more shade are injured by the sun's rays, and rust or scalding follows, particularly with the tender-skinned varieties. Hundreds of bunches of Muscat of Alexandria are more or less rusted every year through a sudden or partial exposure to the light after being shaded by foliage. I think it an error on the grower's part to tie back or remove leaves at any time to admit direct light to bunches of Muscats, as some of the finest and most highly-finished examples that I ever saw had been shaded by a moderately thick canopy of foliage from the time the bunches were set until cut for exhibition.

Where red spider has been troublesome in the past, no doubt the pipes were sulphured with a view to ward off the enemy. It sometimes occurs that a portion of the sulphur remains on the pipes, particularly about the joints. I should not like to assert how long sulphur in such instances would throw off fumes, but there can be no question that it does not lose its power for a year or so, as it can be detected after that period when the pipes are hot, and probably many berries thus become rusted, as it is well known that the fumes of sulphur injure the tender skin of the berries while they are small. W. G. C.

**Grape Bowood Muscat.**—I am quite sure Mr. Temple will pardon me for correcting him in his error in attributing the notes on Bowood Muscat some time ago to the pen of Mr. Douglas. It was I who maintained that there was a distinction between the Bowood and Muscat of Alexandria, and I still do so. Its distinctive marks are shortness of bunch, rounder berries, and more freedom in setting. I do not mean to assert that it would be wise to provide for it at exhibitions now-a-days, as unscrupulous exhibitors might be induced to pass Muscat of Alexandria off as the true Bowood. This, however, has nothing to do with the actual distinction between the two Grapes. I am of opinion that if some of those who believe the difference to be more imaginary than real could see some of the old Vines that were planted when Bowood was first sent out, their opinion would soon be changed.—J. CRAWFORD.

## ORCHIDS.

### SOBRALIAS.

This genus contains many beautiful and distinct species, and appears to be becoming more popular every year. Sobralias succeed well in the temperature of the Mexican house, where I recently noticed some fine specimens in a small collection at Beckenham. These plants, especially *S. macrantha*, are in most excellent condition, and in some cases have a dozen and more fine flowering stems. One great disadvantage with this family of Orchids is the short time that the individual flowers last, but this is amply compensated for by the quick succession in which they appear, for no sooner does one flower fade than another opens, and the succession continues until the stem is quite exhausted. Sobralias are mostly all tall, free-growing plants with slender, reed-like stems, which are well fur-

nished with strongly-plaited deep green foliage, and make handsome specimens even when not in flower. They should be grown in pots of rather large size, as they produce roots freely, and the compost should consist of rough fibrous peat and turfy loam, mixed well together and made sandy. The drainage for this family, as is the case with all Orchids, must be well looked after, and about 3 inches of broken crocks should be given, for at no time in the year must the plants be allowed to be dry. An occasional application of weak liquid manure is also beneficial later in the season. Sobralias are all natives of tropical America, and when well flowered are unsurpassed in beauty by any other kind in the Orchid world. There are somewhere about thirty species, and the following are the most desirable kinds:—

*S. CATTLEYA*, which is represented in only one or two collections in the country, is indeed a remarkable plant. It is an exceedingly tall-growing plant, but I do not think it has ever been flowered under cultivation.

*S. MACRANTHA* is probably the most extensively grown kind in cultivation. It is a native of Mexico and Guatemala, and is an old inhabitant of our gardens. It will grow from 4 feet to 6 feet high, and even more, forming a fine specimen plant in a short time. The flowers of this species each measure about 6 inches across, with broad sepals and petals, the latter somewhat crisped. The whole flower is of a beautiful rich purplish crimson, having a pale yellowish blotch in the centre of the lip. Of this species there have appeared several varieties, a very fine form being known as

*S. MACRANTHA SLENDENS*, which, however, is identical with the type, but has the flowers of much larger size and very deep in colour. I have seen blooms of this kind nearly 8 inches across. Another and a very distinct variety is

*S. MACRANTHA* (Woolley's var.), which is of quite a different habit, not attaining more than 18 inches to 2 feet high. The flowers of this are probably the highest coloured of any. There are also many pale-flowered forms, and also an albino named

*S. MACRANTHA KIENASTIANA*, which grows as tall as the typical plant and is in every way identical, excepting in the colour of its blooms, which are of the purest white. This is a very rare plant, but is well represented in the celebrated collection of Baron Schröder and one or two other gardens.

*S. MACRANTHA PRINCESS MAY* is another distinct kind, of dwarf habit, growing from 2 feet to 3 feet high, and producing flowers with pure white sepals and petals, the lip beautifully shaded with delicate heliotrope. This is of recent introduction. During recent years also we have had some exceedingly fine species added to the genus. One of the most distinct is

*S. LEUCOANTHA*, imported from Costa Rica. It is of fine intermediate habit, and has flowers each measuring about 5 inches across. These are pure white, the lip being beautifully crisped and with a golden yellow throat, from which radiate streaks of orange. Another fine kind, and which makes a beautiful companion for this, is

*S. NANTHOLEUCA*, growing about the same height, and producing at the top of the reed-like stems enormous blooms of a rich yellow throughout. The lip is shaded with a deeper tint and beautifully frilled.

*S. HARDYANA* is another variety of exceptional merit, having fine broad sepals and petals of delicate blush, the latter being deeper than the former, whilst the lip is deep rose in front and golden yellow in the throat.

WM. HUGH GOWER.

*Chysis bractescens*.—A plant of this now in bloom in the collection of Mr. Moore, Chardwar, Brompton-on-the-Water, Gloucestershire, carries eleven fine blooms upon one spike. This, I think, is a very unusual number. It is certainly the

finest spike I have either seen or heard of, and it is undoubtedly a rare occurrence to find so many blooms upon a single raceme. This is a lovely, strong-growing, deciduous Orchid that enjoys plenty of light and heat. During the winter months a cooler temperature and very little water are necessary. It was introduced from Mexico about fifty-five years ago, and since that time it has often been sent home from other parts of South America with *C. aurea*, which latter it greatly resembles when not in flower.—W. H. G.

*Odontoglossum crispum*.—"Beginner" has just taken Orchids in hand, and has begun with some imported pieces of this useful kind. These should not be allowed to bloom the first season, that is to say, those which are already showing flower spikes, because the strain upon the plants before they become established will in all probability severely weaken, and possibly entirely kill them. It is a good plan to let the spike develop until the buds are produced, and then to pinch all these off excepting one or two, which will be enough to decide whether it is a good or bad variety. A few other suitable Orchids for amateurs other than *Odontoglossums* are *Cypripedium insigne*, *C. spectabile*, *Oncidium tigrinum*, *O. incurvum*, *Laha anceps*, *L. albida*, *Cattleya Trianae*, *C. Mossiae*, *C. Mendeli*, *Ada aurantiaca*, *Vanda Amesiana*, and *V. Kimballiana*.—G.

**Orchids at Sherwood, Beckenham.**—In the small collection in this garden are many fine varieties of useful Orchids now in flower, amongst them being good examples of *Cypripedium Lawrenceanum*, *C. barbatum*, both in good form, and a piece of *Schenburgkia tibicinis* carrying ten fine flowers. A beautiful variety of *Cattleya intermedia* is also open, as are *Lycaste cruenta*, *Oncidium incurvum*, *Brassia verucosa*, and a nice specimen of *Oncidium leucochilum*, a strong-growing plant, producing leaves each nearly a foot in length, whilst the scape, which is much branched, will often grow 5 feet or 6 feet high. The individual flowers measure 1½ inches in diameter, the sepals and petals are greenish yellow, barred with brown, and the lip when first open is quite white.—G.

*Oncidium Cebolleta*.—I recently noticed a fine plant of this curious species. It produces round, tapering leaves, each from 8 inches to 15 inches long, whilst the flower-spike seldom exceeds more than about half the length of the foliage. It has been found over a large portion of Brazil, Mexico and the West Indies, and consequently differs somewhat in the colour and markings of its flowers. These usually are yellow, spotted with chestnut-red, and in the best forms the lip is bright canary-yellow. In our gardens it is also known as *Oncidium juncifolium* and *Oncidium longifolium*.—W.

*Celogyne pandurata*.—This is a remarkable Orchid, the unusual colour of its flowers always making it a conspicuous object. A flower comes from "J. W." which measures quite 4 inches across, the sepals and petals nearly equal and of a uniform pale green, whilst the curiously formed lip is yellow, blotched and streaked with black. Although curious it is very pretty, and must be classed amongst the largest flowered in the genus. It was first discovered in the hottest jungles in Sarawak, and consequently requires strong heat and plenty of moisture under cultivation. This is not, however, the only green-flowered *Celogyne*, for there is another, also introduced by Messrs. Low and Co., of Clapton. This is *Celogyne Parishii*, the flowers of which are only about 2 inches in diameter, the colour yellowish green, the lip spotted and veined with black. In *C. Parishii* the flower-spike rises from the top of the pseudo-bulb, and in *C. pandurata* this proceeds from the side of the bulb.—H.

*Dendrobium suavisimum*.—This, among the brightest coloured of the golden yellow *Dendrobiums*, is an excellent Orchid for exhibition. It is strictly evergreen, having shortish fusiform pseudo-bulbs each bearing about three leaves, thick and leathery in texture. The racemes are produced from near the tops of the pseudo-bulbs and

the blossoms are deliciously scented. It is one of the freest flowering of this section, but unless the plants are vigorous it is better to restrict the number of spikes, as if too many are left the eyes at the base of the pseudo-bulbs are apt to become blind, the plants being apparently too weak to push new growths. When this occurs they must not be allowed to flower at all, or probably the plants will be killed outright, but every encouragement ought to be given to induce the eyes to break. If the plants have been long in the same compost they should be turned out of the pots and spread on a moist stage, treating them after the manner of newly-imported plants, replacing them in the pots as soon as they show signs of breaking. What causes this cessation of growth it is difficult to say, but overflowering certainly predisposes the plant to it. I have also noticed this in *D. chrysotoxum* and *D. clavatum*, but never in *D. densiflorum* or *thyrsoiflorum*, though possibly they are also subject to it. With strong and vigorous plants to commence with, there is no difficulty in keeping *D. suavissimum* healthy and obtaining a full complement of flowers annually. Like most of the evergreen kinds, it may be grown in the Cattleya house and should not be much dried at the root in winter, a few weeks' rest in a lower temperature being all that is necessary. Newly-imported plants may be established in very small pots, and at no time is a large receptacle necessary. *D. suavissimum* is a native of Burmah, and although sometimes classed as a variety of *D. chrysotoxum*, is abundantly distinct both in habit and flowers.—H.

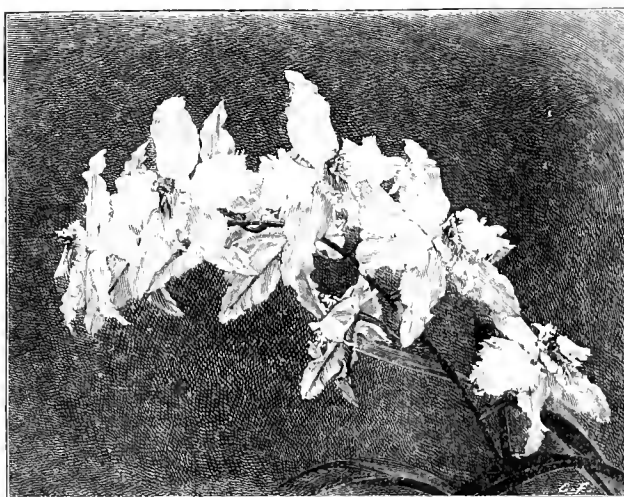
#### ODONTOGLOSSUM CRISPUM VIRGINALE.

*ODONTOGLOSSUM CRISPUM* has been not inaptly described as the queen of Orchids, and the variety here figured is the most chaste and lovely form of the species in existence. Although many of the spotted varieties (*guttatum* section) possess greater value from a monetary point of view, this pure white variety must be awarded the first place for its delicate beauty, the glistening white of the sepals and petals and the refined appearance of the flowers having a subtle and indescribable charm possessed by no other kind. Although no other varietal name is recorded, *O. c. virginale* does vary both in size and in the width of the petals. A fine form that I flowered in 1893 measured 5 inches across the petals. These were each  $1\frac{1}{2}$  inches across, pure white, without any spot or marking except the yellow crest to the lip, and of great substance. *O. c. virginale* appears to have been named and first exhibited by Messrs. B. S. Williams and Son, of Holloway, at South Kensington in 1882, when it was deservedly awarded a first-class certificate by the Royal Horticultural Society. Since then it has appeared in many other collections, but good forms are still uncommon. Like all the varieties of this species, it requires a cool, moist atmosphere all the year round; the house where it is grown must be heavily shaded all through the summer months in order to keep the temperature as low as possible, and air must be admitted night and day. During the winter the plants must be arranged close to the glass, so as to catch every ray of light, and the temperature at this season ought not to fall below 48°. Very little is needed in the way of compost, a thin layer of peat and Sphagnum sufficing over the drainage, which must be sufficient to carry off the copious supplies of water that are needed during the growing season. If the atmosphere is right, the Sphagnum will grow freely and form a dense cushion around the base of the pseudo-bulbs, keeping them cool and causing them to root freely. A little of this may be removed on the approach of winter, but not suffi-

cient to bare the roots. Slugs and small snails work a good deal of mischief among the spikes when growing, and this entails watchfulness and care on the part of the cultivator. The culture of *Odontoglossums* was referred to somewhat in detail recently in *THE GARDEN*, and the treatment there advised for the typical *O. crispum* suits this variety in every respect. R.

#### SEASONABLE NOTES ON ORCHIDS.

THE almost tropical weather by day and the cold nights and harsh winds prevailing have lately necessitated a great deal of care and attention to the ventilation, shading and damping. In order to keep the atmosphere moist the syringe must be freely plied between the pots, and, excepting in the Cattleya house, fairly heavy syringings overhead are also advisable. These must not be given too frequently, however, or late in the day, as too much moisture about the young shoots at night is apt to cause decay. A little heat must still be kept in the pipes in the East India and Cattleya houses, this allowing of free ventilation in the mornings before the blinds are let down. All arrears of



*Odontoglossum crispum virginale.* Engraved for *THE GARDEN* from a photograph sent by Mr. W. Taylor, Glasgow.

spring potting should be seen to at once and the plants arranged for this season's growth. *Dendrobiums*, as they become established in the new pots, may have the lightest and sunniest positions, such as an unshaded end where they get the sun nearly all the morning, or where there is an opening between the blinds. *Thunias*, too, delight in a sunny position, and, like the aforementioned genus, like a brisk, moist heat. These and *Calanthes*, or other semi-terrestrial kinds potted some time since, are now growing freely and will require increased supplies of moisture as the roots run into the new compost. A deal of care is still necessary, however, and it is much better to err on the side of too little water than too much, as the old pseudo-bulbs are still fairly fresh and supply the young shoots with moisture sufficient for their sustenance. *Cymbidiums*, *Cypripediums*, *Aerides*, and other shade-loving Orchids will be better arranged in the body of the house, a little further from the glass where the action of the sun is not quite so powerful at closing time. It is not advisable to keep *Odontoglossum crispum* dry after this date, as any plants strong enough to flower should by this time have the spikes well advanced. A good soaking in a large pail or tub should be given every other

day until the pseudo-bulbs plump up, and care is necessary to avoid snapping off the flowers, as these are extremely brittle. As the earliest plants go out of bloom they may have the compost put in order, not disturbing the roots more than is absolutely necessary, and carefully watering for a time until the roots are again on the move. Large-growing *Vandas* of the tri-color, *suavis*, and *gigantea* type may be arranged on the central stage of the Cattleya house, where they will be subjected to a slightly lower temperature, but more sunlight than in the East India house, this consolidating the growth and being more conducive to free flowering. *Ceologyne cristata* is an accommodating plant as to temperature, but dislikes strong sunlight, and must on this account be placed in a shady corner. If not already done the plants must be looked over for insects and carefully sponged, or red spider and scale may possibly put in an appearance on the young foliage, greatly disfiguring it and weakening the plants. *Burlingtouia decora* is a straggling growing plant, and after flowering should have attention. The rhizomes may be notched half-way through between each pseudo-bulb, disposing these as regularly as possible over the surface of the compost, and filling in when necessary with fresh peat and Sphagnum. This is very advantageous to the plants, as many of the old pseudo-bulbs produce new growths, making a more shapely and better furnished specimen. In the cool house *Masdevallias* and *Restrepias* are flowering freely. These are very subject to the attacks of yellow thrips, and frequent fumigations have to be resorted to if the insects are plentiful.

*Disa grandiflora* is also subject to their attacks if not kept well syringed overhead and freely watered at the roots. The plants of this are best arranged close to a ventilator kept always open or near the door, as it is impossible now to keep them too cool under glass. Insects must be vigorously attacked on every possible occasion, and every care taken to promote a free, healthy growth in all departments. I recently saw a fine specimen of *Ceologyne asperata*, which is apparently not much grown. The racemes of flower are about a foot in length, but would probably be longer in very strong plants. Each flower was about  $3\frac{1}{2}$  inches across, the sepals and petals creamy white, the lip similar in ground colour, with a bright orange-yellow centre, from which radiate brown lines. The flowers are very agreeably scented, the pseudo-bulbs strong, and each bearing a pair of long lanceolate leaves over a foot in length. Being such a strong-growing kind it requires ample root room, and may be grown in equal parts of peat and Sphagnum, with plenty of small crocks. This species is a native of Borneo, where it grows on the banks and in the vicinity of rivers in low, marshy positions. It was discovered and introduced by Messrs. Hugh Low and Co. about fifty years ago, and thrives in a Cattleya house temperature. R.

#### SHORT NOTES.—ORCHIDS.

*Oncidium sarcodes*.—This is now commencing to open its blooms. It is of very easy culture, and

should be in every collection however small. The flowers are produced on long arching racemes, and individually measure upwards of 2 inches in diameter. The sepals and petals are clear yellow, heavily blotched with chestnut-brown, the lip bright yellow with a few small spots at the base. It grows on the Organ Mountains at considerable elevations.—G.

**Cypripedium macropterum.**—This is a cross between *C. Lowi* and *C. superbiens*, the leaves being prettily tessellated as in the latter. The flowers are large, with long, broad, drooping petals of a purplish-mauve colour, finely spotted with black. The lip is also of good form, helmet-shaped, and pale yellowish brown. It is a very desirable plant and one that is by no means common outside the best collections.—G.

**Schomburgkia tibicinis.**—I am in receipt of blooms of this from Geo. Challis, who states that they have been open and in full beauty for a very considerable time. Individually the flowers measure just on 3 inches across and are very showy. The petals are narrower than the sepals, more undulated, and of a rich purplish-rose; the lip is yellow, streaked with purple, the front lobe white, with a purplish margin. The flowers are produced several together at the top of a long spike, which attains several feet in length.—W.

**Burlingtonia fragrans.**—This sweetly-scented little plant deserves a place in every collection on account of the powerful fragrance of the flowers, which very much resembles that of our common Hawthorn. It is of dwarf habit and succeeds best upon a block of wood or in a shallow pan. It should be placed in a temperature similar to that of the *Cattleya* house. The flowers are pure white, with a stain of yellow on the lip. It is a native of Brazil, where it is said to grow on the highest branches of the Cedar trees.—W. G.

## SOCIETIES AND EXHIBITIONS.

### ROYAL HORTICULTURAL SOCIETY.

MAY 14.

HAVING regard to the fast approaching Temple show of next week, the exhibits at the Drill Hall on the above date were most extensive. The Royal Botanic Society's show held on the following day would in a measure explain the presence of some few groups, which were taken from one centre to the other, but beyond all these possibilities the display was of a most encouraging character, no better testimony being needed of the increasing popularity of these bi-monthly meetings. The lecture created more than the usual amount of interest and was very well attended. Particulars relating to this part of the programme will be found in the detailed report following these remarks.

Hardy cut flowers occupied the greatest amount of space at this meeting, this being just the height of the season for late Tulips (Parrot and florist vars.) and many of the best species. The late Daffodils were staged in extensive numbers, so were other popular early spring flowers, as Spiræas, Pæonies, Violas, hardy *Cypripediums*, *Rhododendrons*, and *Lilacs* (in great variety, both single and double varieties). Cut Roses were also specially good. Of plants there was no lack to fill a goodly space; the best of these were a fine specimen of *Medinilla magnifica*, well-grown *Gloxinias* of a splendid strain, new *Caladiums*, as well as other choice varieties. Of Orchids there was not such an extensive display; nevertheless a number of very choice kinds was staged, *Cypripediums* in this instance coming to the front, several also of the Veitchian hybrids being strongly *en vogue*. The fruit committee was not in any sense heavily taxed, the most noteworthy exhibit being the new Strawberry Leader, to which a first-class certificate was awarded. Cucumbers are now coming forward in considerable numbers, but no new kind of marked advance was shown, although good types of varieties already in commerce were to be seen. The plan adopted of screening off a portion of the hall for the specially prepared specimens to illustrate the lecture was suggestive of what should be done to shut off the committees during their deliberations. It does

not seem to be altogether a difficult matter to do this instead of having the present arrangement of curtains, &c.

### Orchid Committee.

First-class certificates were on this occasion awarded to—

**CYPRIPEDIUM GODEFROYÆ LEUCOCHEILUM.**—A most beautiful and extraordinary form, bearing an enormous flower upon quite a small plant, the former being to all appearance quite out of all proportion to the latter. In outline the flower bears a resemblance to that of *C. bellatulum*; the dorsal sepal is, however, much larger, whilst the lip, instead of being spotted, is of a pure creamy white, this shade being the ground colour throughout, the other marking being dark bronzy purple spots running in lines in the dorsal sepal, whilst the petals were very profusely spotted in the same colour and fully  $1\frac{1}{2}$  inches in width. From Mr. R. J. Measures, Cambridge Lodge, Camberwell.

**CYPRIPEDIUM GERTRUDE HOLLINGTON** (*C. ciliolare* × *C. bellatulum*).—Previous hybrids have been exhibited resulting from this or nearly allied crosses, but the present variety surpasses them all and must be classed with the very finest hybrids now in cultivation. The growth is remarkably vigorous, the stout, fleshy, dark-coloured prominent leaves being some 3 inches across and 7 inches in length. The flower was also unusually large, with very broad semi-drooping petals fully  $1\frac{1}{2}$  inches wide; the ground colour of which and that of the dorsal sepal is a creamy white, with a profusion of dark vinous-purple spots and shading of the same tint on the petals, whilst in the dorsal sepal the same colour runs in veins. The lip is of extra size also and of a dark bronzy purple shade. From Messrs. H. Low and Co., Upper Clapton.

Awards of merit were given to—

**EPIDENDRUM O'BRIENIANUM ROSEUM.**—A dark rosy form of this beautiful hybrid between *E. radicans* and *E. evectum*, the spike of flowers being somewhat slender with the growth erect. *E. O'Brienianum* itself has deep crimson-coloured flowers, this form of it being quite distinct in this respect. From Messrs. J. Veitch and Sons, Royal Exotic Nursery, Chelsea.

**CATTELEYA MENDELI PRINCESS OF WALES.**—A most charming variety, the sepals and petals flushed with light pink, the most distinctive feature, however, being the intensely brilliant blotch of dark crimson-purple upon the lip, in contrast to which the old gold veinings in the throat stood out very conspicuously. From Mr. De Barri Crawshaw, Rosefield, Sevenoaks.

**ODONTOGLOSSUM CRISpum VAR. THE BRIDE.**—One of the most beautiful white varieties of this popular *Odontoglossum* yet exhibited, with flowers of the purest white, the sepals and petals of great breadth, the golden spotting upon the labellum adding to the beauty of each flower, of which there were fourteen upon the stout semi-erect spike. From Mr. W. Thompson, Walton Grange, Staffs.

**CATTELEYA MENDELI VAR. LEUCOGLOSSA.**—One of the most delicately beautiful forms of this fine *Cattleya* yet shown, the sepals and petals having the faintest possible flush upon a white ground, the labellum itself being pure white and deeply fringed, faint golden lines appearing in the throat, all traces of the crimson-purple being lost. From Mr. Thos. Statter, Stand Hall, Manchester.

Botanical certificates were awarded to *Dendrobium taurinum* (the Bull-headed *Dendrobium*), the sepals and petals yellowish green, the lip light purple, growth erect, the spike terminal with twelve flowers; from Messrs. J. Veitch and Sons; *Cirrhopetalum grandiflorum*, with larger flowers than usual, these being of a pale golden shade with dark veins (shown as *C. Macraei*), from Mrs. Langton, Reigate, and *Dendrobium Strongylanthum*, a botanical curiosity, and nothing more. From Messrs. H. Low and Co.

Messrs. J. Veitch & Sons sent a very bright and attractive group, comprising a variety of good

things, amongst which were *Laelio Cattleya Latona* and *L. C. Hippolyte* (*L. cinnabarina* × *C. Mossie*) with the traces of *L. cinnabarina* very distinct in both instances, the former with light orange-yellow flowers and those of the latter of the same colour, only deeper, a rose-purple suffusion being apparent. These are two superb hybrids. *Cattleya Mossie*, a fine dark form, *C. Mendeli*, *C. Schroederæ*, and *Laelia purpurata* in fine varieties were included, also several *Cypripediums*, as *C. caudatum* Wallisi with pale golden tail-like petals of great length, shaded bronze towards the extremities, the dorsal sepal being of the same colour and the inner portion of the lip of the purest white, the one spike bearing four flowers; *C. Euryale*, partaking greatly of *C. Lawrenceanum*, one of its parents, but with the petals spotted as in *C. Argus*; *C. selligerum majus*, a fine flower; *C. orphanum*, a distinct hybrid, and *C. Rothschildianum* in good form. *Chysis Chelsoni*, a lovely hybrid of rich colouring, deeper in this respect than usual; *Disa langleyensis*, a beautiful rosy pink hybrid with as many as twelve flowers and buds to the spike, the growth compact; *Masdevallia splendida* var. *Parlatoreana*, deep orange flushed with purple; and *Masdevallia grandiflora*, an extra fine form of *M. Veitchi*, which was itself also shown, were also sent. *Dendrobiums* were represented by *D. thyrsiflorum* with fine spikes, by *D. glomeratum*, a singularly beautiful *Dendrobium* with flowers of a rich rose-purple colour, the lip being singularly small and of a darker tint, and by *D. infundibulum*, a handsome species not now often seen. Of *Odontoglossums* there were good white forms of *O. crispum*, *O. triumphans*, and *O. Uro-Skinneri* in good character. *Oncidium superbiens*, a fine species of the *O. macranthum* habit; *Cymbidium Lowianum* with the crimson of the lip of a deeper shade than usual; *Oncidium ampliatum majus*, *Dendrobium Phalanopsis Schroederianum*, *Maxillaria Sanderiana* with extra fine flowers, the dark chocolate and pure white in decided contrast; *Odontoglossum Ruekerianum* with a good branching spike, and *Cypripedium bellatulum*, unusually vigorous in growth, were included (award silver Flora medal).

Mr. W. Thompson sent a smaller group consisting chiefly of extra fine forms of the best varieties of the *Odontoglossums*, amongst which were *O. cordatum aureum*, a pale golden form with its flowers singularly like those of a *Brassia* in style, and *O. Ruekerianum ocellatum*, an extra fine variety of deep colour, the flush of purplish rose and the deep chocolate spots making it very conspicuous, the flowers being of extra size also. *Odontoglossum Rossi rubescens* is quite a distinct form, the white having given place to pale rose in the lip and on the petals, the plant profusely flowered. *Odontoglossum Andersonianum* (Thompson's var.) has a clear white ground colour and chocolate spots and blotches, and others of a distinct crimson shade at the base. *O. crispum*, a singularly distinct variety, has some of the features of *O. Andersonianum* in its small spots, the whole flower being flushed with rosy purple. *Cattleya Skinneri alba*, which also came from Mr. Thompson, is quite a gem amongst *Cattleyas*, with the purest white flowers, every suspicion of colour as seen in *C. Skinneri* itself being obliterated, only the faintest trace of pale sulphur appearing in the throat (silver Banksian medal).

Other exhibits of Orchids were not numerous, still some few very good things were shown. Two very vigorous examples of *Phaius* sp. in the way of *P. Sanderianus*, but scarcely so handsome, came from Mr. H. Westman, Little Haywood. One plant bore two spikes and the other one; in each case these had already reached the height of  $5\frac{1}{2}$  feet, being scarcely more than half expanded (a cultural commendation was awarded). From Mr. H. Grinling, Harrow Weald, came *Cypripedium caudatum* Wallisi, not quite so far advanced as Messrs. Veitch's example, hence not so rich in colour. *C. tortile* came from the same source, its rather long petals being twisted; in other respects it bore some likeness to *C. levigatum*. Messrs. F. Horsman, Colechester, showed *Odontoglossum*

nat. hyb., intermediate between *O. maculatum* and *O. cordatum*. Mr. W. Cobb showed *Cattleya Mossiae* (Dulcote var.), in which the lip was broader than usual and deeply fringed. Mr. Smee sent from The Grange, Wallington, a noteworthy example of *Odontoglossum cirrhosum* flowering upon the old spikes of last year, as well as on this year's also. Mr. Cummings (gardener) stated "that the tallest spikes bloomed last year and afterwards produced bracts or leaves, flowering again on the same spikes this year. The other spike has been made this spring." Mr. Thos. Statter showed *Cattleya Clesiana* in the way of *C. intermedia*, having pale rosy-flushed sepals and petals and faint crimson spots, the lip being deeply fringed and much darker in colour. Mr. J. Gurney Fowler, Woodford, showed *Cattleya Mendeli* (Glebelands var.), a very fine form, with pure white sepals and petals (the latter being of extra breadth), the lip of a purplish crimson, with pale golden throat. Another variety of the same species had a rosy lilac lip and slightly flushed sepals and petals. Messrs. H. Low and Co. showed *Laelia purpurata* Schradlerae, having very faint purplish veins on the labellum; also *L. p. Russelliana*, in which a pale purple supplanted the deeper shade usually seen. *C. Schilleriana*—quite a gem amongst the dwarf species—was also included, bearing very fine flowers. A few hybrid *Cypripediums* in which *C. niveum* and *C. concolor* had made impressions were also included. From Mr. Ward, Salisbury, came a good form of *Odontoglossum crispum*, whilst a similar exhibit came from Mr. de Barri Crawshaw, who also had a twin-bulbed plant of *Odontoglossum Andersonianum* bearing a good spike.

#### Floral Committee.

Awards of merit were granted to the following—

**LILAC LA TOUR D'AUVERGNE.**—A handsome variety with a dense truss, the flowers mostly semi-double and of a deep rosy lilac colour. Shown by Messrs. Paul and Son, Cheshunt.

**SAMBUCUS RAEMOSA AUREA.**—A yellow form of the cut-leaved Elder, the colour of the leaves pale greenish-yellow, distinct and pretty, as the variegation is of a healthy tone. From Messrs. K. Wezlenburg and Son, Leyden, Holland.

**TULIPA ELEGANS ALBA.**—This charming variety of an old garden species has pure white flowers, with the faintest margin of red on the edges of the petals. The colour does not spread into the petals, as in another edged Tulip named *Picotee*. It is also useful for its late-flowering and has the tall, handsome character of the *Gesneriana* varieties. Shown by Messrs. Barr and Son.

**Tulips**—quite the chief feature of the meeting—were nobly represented in the great group of hardy flowers staged by Messrs. Barr and Son, which occupied one side of the Drill Hall. The late-flowering species included *T. Gesneriana*, *T. vitellina*, a charming cream-white Tulip; *T. flava*, *T. fulgens*, brilliant in colour; *T. elegans*, *T. Batalini* and *T. macrospeila*—all shown in quantity and fine form. It is a pity these Tulips are not more common in gardens. The new race of self-coloured *Gesner Tulips* was noteworthy in this group, and the varieties shown—about twenty in number—represented a selection of the very best, picked out from a trial of over 200 kinds. A fine lot of the florists' Tulip in breeder and rectified forms was also shown. We noticed that the visitors gathered round the noble *Gesner Tulips*, which in decided colours are by far the most pleasing. Irises in variety, single *Paeonies* in fine distinct kinds, alpine *Phloxes* and other interesting flowers of the season made up the group, to which a silver-gilt Banksian medal was awarded.

Mr. Ware, of Tottenham, also had a fine group of hardy flowers, comprising Tree *Paeonies* (pot plants), carrying numerous flowers, *Spiraea astilboidea*, *S. palmata*, and *S. japonica compacta*, *Sarracenia flava*, hardy *Cypripediums*, good specimens, carrying many flowers; *Anemone narcissiflora*, a pretty, little-known species; and cut flowers in quantity of the best late Tulips

in variety, Irises, and early flowering Gladioli. A silver Flora medal was awarded. A similar award was made to Messrs. J. Veitch and Sons, of Chelsea, for a large group of Tulips. The grotesque and showy Parrot varieties were most prominent, especially *Cramoisi* Brilliant, rich dark crimson; *Constantinople*, bright crimson; and *Perfecta*, crimson and yellow. A variety called *Coffee Colour*, of dull and dreary tints, seems hardly needed in this section. *T. Bouton d'Or* was good in this group, also *T. Gesneriana*, *T. fulgens*, and several bizarre and byblomen varieties. Messrs. Veitch also showed the following *Caladiums*: *Marquis of Camden*, large leaf, red, with darker coloured veins; *Sir Julian Goldsmid*, red veined, lighter red and white in the body of the leaf; *Lord Derby*, leaves soft rose, veined with green; and *Sir William Broadbent*, with bright red leaf veins, and blotched with white on a green ground. Messrs. J. Laing and Sons received a silver-gilt Banksian medal for a grand group of *Gloxinias* arranged with Ferns and Palms. The plants were carrying fine flowers of erect habit and rich colour, especially of note being *John Laing*, bright crimson self; *Mrs. J. Laing*, deep purple, with white margin to the petals, a large well-formed flower; *Majestic*, purple, with white throat; and *Lord Hillingdon*, crimson throat, and broad white margined petals. *Streptocarpus Royal Purple* in this group was conspicuous, having fine flowers, deep blue, veined with purple; also *Caladium Rose Laing*, the leaves of great size, white, with rosy tints about the centre of the leaf. Mr. G. Mount, of Canterbury, again showed *Roses* well, chiefly Hybrid *Perpetuals*, the best being *Mrs. J. Laing*, *General Jacqueminot*, and *Ulrich Brunner*. A silver-gilt Banksian medal was awarded. Messrs. J. Peel and Sons had a group of fine-foliaged plants, including *Caladiums*, *Diacaenas*, *Strobilanthes Dyerianus*, and *Begonia Arthur Malet*, the last two bright in leaf colour. A silver Banksian medal was awarded. Messrs. G. Paul and Son, Cheshunt, received a bronze Banksian medal for a group of *Cannas*, *Lilacs* in fine variety, *President Canot*, pale blue and double, *Marie Legraye*, white, and *Souvenir de Louis Spath*, specially noteworthy, and seedling *Rhododendrons*, hybrids between *R. Fortunei* and named varieties, one named *Mrs. C. Butler*, with large, soft flesh-pink flowers, being remarkably distinct and good. Messrs. J. Cheal and Sons, of Crawley, sent an interesting lot of cut specimens of the best flowering and coloured-leaved trees and shrubs, comprising the Japanese and other double *Cherries*, *Pyrus Malus* in variety, *Spiraeas*, *Rhodotypos kerrioides*, *Akebia quinata*, purple *Hazel*, *Acer platanoides* *Schwedleri*, with bright red leaves and other well-known trees. A bronze Banksian medal was awarded. Mr. Anthony Waterer showed *Lilac Souvenir de Louis Spath*, with fine deep-coloured, large trusses, and *Alba Grandiflora*, this latter named kind being also well shown from Panshanger Gardens. Mr. W. Paul, of Waltham Cross, sent some new *Roses*. *Clio* and *Corinna* are now well known; *Sylphe* has a pale pink flower, which deepens to rose, full and of fine form; *Empress of Russia* in its bold globular flower resembles *Archiduchesse Marie Immaculata*, but is distinct in colour, having that metallic and copper-red hue of *L'Idéal*. The flowers and growth indicate a robust habit. *Queen Mab*, a China variety, also promises well, with lovely buds of a deep buff colour, expanding into pale fawn yellow flowers. *Rose, Crimson Rambler* was shown by Mr. Hudson, of Gunnersbury House Gardens, in fine many-flowered clusters cut from a plant planted out in a greenhouse, and the same exhibitor sent a finely-bloomed branch of the *Judas Tree*. Mr. Moore, of the Botanic Gardens, Glasnevin, sent cut specimens of two *Brownias*, the flower-trusses of huge size, with the blooms crowded into a dense mass; *Crinum capense*, fine spikes from the open ground, and hybrid *Sarracenias*, one with pure white petals, others a dark brown red, and many in intermediate shades. A rich saffron-yellow *Globe Flower* named *Golden Gate* came from Messrs.

Koll and Sontag, Rhine Nurseries, Dusseldorf, and *Auriculars* and *Polyanthuses* were sent by Mr. R. Maitland, Comrie Castle, Dunfermline, Fife. A fine specimen of *Medinilla magnifica* bearing many of its large drooping flower clusters was shown by Mr. J. F. McLeod, Dover House Gardens, Roehampton.

*Daffodils* in competition for Mr. Barr's prizes were again shown, Mr. R. Maitland, Comrie Castle, being first, and Mr. C. J. Backhouse, St. John's, Walsingham, Darlington, second. Mr. Backhouse also staged another much larger group for the cup competition, but the three weeks' interval between the meetings has greatly handicapped the northern growers, and they were unable to show but few of the trumpet-flowered kinds. There was only one entry for the prizes for Tulips, Mr. J. T. Bennett-Poe receiving first prize for a well-grown varied lot.

#### Fruit Committee.

There was only a limited number of exhibits before this committee, specially interesting being Messrs. Laxton's new Strawberry and some Canary Island fruit and vegetables.

A first-class certificate was awarded to—

**STRAWBERRY LEADER.**—A very fine fruit, a cross between Noble and Latest of All. The fruits are wedge shaped, of a rich brisk flavour, and firm, the seeds being prominent. From Messrs. Laxton Brothers, Bedford.

From Syon House, Brentford, Mr. Wythes sent a very fine dish of *Amsden June Peach* to show its value for early forcing. Mr. Gilman, Ingestre Gardens, Stafford, sent a fair-sized Melon, a seedling white flesh and slightly netted, but too ripe. Mr. McLeod, Dover House, Roehampton, sent a nice dish of *Asparagus*. Mr. Mortimer, Swiss Nursery, Rowledge, Farnham, sent a dozen very pretty fruits of a new Cucumber named *Marvel*, the plant also being shown in fruit. Mr. J. Vert, Audley End Gardens, Saffron Walden, also sent some very fine Cucumbers, ribbed, and of great length, the varieties being *Vert's Improved* and *Vert's Favourite*. Messrs. Veitch and Sons, Royal Exotic Nursery, Chelsea, sent *Allan's Favourite Cucumber*. As there is to be a trial of Cucumbers at Chiswick shortly the committee requested that the above varieties be sent for trial. Messrs. Williams and Son, Upper Holloway, sent a new dwarf Bean growing in pots. This was shown at a previous meeting, and requested to be sent to Chiswick for trial. Messrs. Elder, Dempster and Co., Liverpool, sent a most interesting exhibit from the Canary Islands to illustrate Dr. Morris's lecture. This included a very fine bunch of Bananas, cases of Tomatoes and Fluke Potatoes, which were quite ripe and free of blemish. The Travelling Horticultural Co. sent models of their new houses on rails.

The lecture by Dr. Morris, of Kew, on the "Vegetation of the Canary Islands," received an added interest, being illustrated by the aid of the magic lantern, pictures of the vegetation of the islands being successfully shown on the screen. He briefly described the geographical features of the islands, remarking that every acre of soil cost £200 to obtain, as the natural soil lies buried beneath about 20 feet of large stones, which are gathered together and piled up to make roads and watercourses for irrigation, whilst not infrequently you might see them piled together in the middle of the field with the ground cultivated around. He briefly reviewed the vicissitudes the islands have passed through in connection with their commercial products, which began with the Vine, which was a success till the dreaded fungus *Oidium* ruined many plantations; later on the Sugar-cane was largely planted, but the staple and profitable industry of the present is the growth of Bananas, Tomatoes and Potatoes. As an instance of the richness of the vegetation in certain parts, he found 800 different plants in a small area, and of these, 400 are peculiar to the island, whilst only about 100 of them are at pre-



sent in cultivation in this country. Some plants sent from Kew—natives of the islands—were shown, including that fine Buttercup, *Ranunculus cortusifolius*, the well-known *Cytisus racemosus*, *Cytisus filipes*, a pretty kind with slender, green shoots and pure white, fragrant flowers. *Cineraria cruenta*, graceful and showy in the extreme, and others were shown; whilst illustrations of such as the Dragon Tree, Canary Palm, Fig trees, with large, but uneatable fruits, and Aloes, with towering flower-spikes, were shown. Space does not permit of giving more than the above bare outline of a lecture that was of special interest and much appreciated by all who listened to it.

### ROYAL BOTANIC.

#### SUMMER SHOW, MAY 15.

THE interest in this fixture certainly seems to be waning, and there was a distinct falling off in the competitive exhibits, whilst in many classes there were no entries at all. The miscellaneous contributions from nurserymen made up the greater portion of the display. In two classes for stove and greenhouse plants only one entry appeared, from Mr. Bond, gardener to Mr. S. T. Fisher, The Grove, Streatham. This group consisted chiefly of young Palms, Crotons, and Dracenas, such as would be used for table decoration, a second prize being awarded. Two classes for Orchids were represented by one small group, which was given first prize, from Mr. G. Cragg, Percy Lodge Gardens, Winchmore Hill. It consisted chiefly of *Cattleyas* and *Laelias*. Mr. Charles Turner was first for a group of Roses, showing good specimens, freely flowered, and delightfully fresh. The best H.P.'s were Juno, pink; Charles Lawson, deep rose; Ulrich Brunner, cerise; Camille Bernardin, and La France. Edith Gifford and Souvenir de S. A. Prince were good among Teas; also Celine Forestier and Crimson Rambler. Messrs. Paul and Son were second. Mr. Charles Turner was also first for specimen Azaleas, but the plants were mere dwarfs compared with the specimens we used to see. Marie Planchet, pure white, with petals undulated on their edges; Roi d'Hollande, deep red; and M. V. Savart, rich blood crimson, were noteworthy kinds. Mr. Scott, gardener to Miss Foster, The Holme, Regent's Park, was second. In the amateurs' class for specimen Azaleas Mr. Barrell, The Hoo, Sydenham Hill, was first with very formal rounded specimens. He was also first for a group of Azaleas, Mr. R. Scott being second. The first prize for Pelargoniums went to Mr. Charles Turner. Of show Pelargoniums, Mystery, Joe, Maid of Honour, and Comtesse de Choiseul were good. Among the fancies, Princess Teck, Fanny Gair, and Ellen Beck were the best. Mr. Ware, of Tottenham, was an easy first with a group of hardy plants, his best specimens being *Lilium Harrisii*, *L. davuricum*, *L. candidum*, *Iris germanica*, *I. florentina*, *Saxifraga pyramidalis*, *Phlox canadensis*, with *Spiraeas* and hardy *Cypripediums*. Messrs. Paul were second. Mr. Ware also received first prize for a very fine group of Begonias. The plants, dwarf and freely flowered, consisted of single and double kinds in equal proportions. The best *Gloxinias* came from Mr. Bond, and Mr. R. Scott was second.

A feature of the show was the grand group of Roses shown by Messrs. W. Paul and Son, of Waltham Cross, who received a silver medal. The specimen plants were finely flowered and comprised the best varieties. Mrs. John Laing, Clio, Denmark, Duke of Teck, Magna Charta, Caroline Testout, and Triomphe de Caen in Hybrid Perpetuals were noteworthy. Claire Jacquier, a climbing clustered *Polyantha* Rose with rich nanken-yellow buds and paler flowers, was shown in profuse bloom, whilst cut flowers in quantity of *Maréchal Niel*, Queen of Queens, Clio, and numerous other Teas and Hybrid Perpetuals made a conspicuous margin to the group. Equally meritorious was the group of fine-flowered and flowering plants set up by Messrs. J. Laing and

Sons, and with abundant room the arrangement was of an unusually high character, a silver medal being awarded. Many good Orchids were in this group, also *Nepenthes*, *Caladiums*, *Palms*, *Dracenas*, with *Gloxinias* and *Streptocarpi*. Messrs. B. S. Williams and Son had a large group of *Palms*, *Caladiums*, *Crotons* and *Dracenas*, a silver medal being awarded. Mr. R. Scott received a small silver medal for a group of flowering and fine-leaved plants, and a bronze medal was awarded to Mr. Perry, gardener to Mr. J. C. Tasker, Middleton Hall, Brentwood, for a smaller group of the same character. Roses, specimen plants, and cut flowers were also well shown by Mr. W. Rumsey, of Joyning's Nurseries, Waltham Cross, who received a silver medal, whilst a bronze medal went to Mr. G. Mount, of Canterbury, for a smaller, but meritorious, lot of cut Roses. Messrs. Veitch sent a group of Tulips which was given a silver medal, and Messrs. Barr received a small silver medal for Tulips and other hardy flowers, both exhibits practically identical with those that appeared at the Drill Hall on Tuesday. Mr. Ware received a bronze medal for a fine group of Tulips and early *Gladioli*, and a similar award for a group of Tree *Paeonies* grown in pots and carrying good flowers. Mr. T. Rivers, of Sawbridgeworth, showed fruiting plants in pots of Early Rivers Nectarine. The fruits were of large size and richly coloured. Trees of Early Beatrice Peach and May Duke Cherry in fruit were also shown. A silver medal was awarded. Messrs. Paul and Son were awarded a bronze medal for *Cannas* and *Lilacs* in fine variety. Cut flower decorations from Messrs. B. S. Williams and Son received a silver medal, the same going to Messrs. Dobbie for a fine display of *Violas*, *Blush Queen*, *Marie Stuart*, *Sylvia*, *William Niel*, *Iona*, *Gipsy Queen*, *Max Kolb* and *Picotee* being conspicuous. Standard plants of *Mignonette* were shown by Mr. W. Barrell. A *Carnation* named *Blenheim Beauty*, with large, white, purple-flaked, *Malmaison*-like flowers, came from Mr. T. Whillans, *Blenheim Gardens*, and Mr. Knowles, of Woking, showed *Daphne cneorum*, a variety rather darker in colour than the type, and said to be a fortnight later in coming into bloom.

A full prize list will be found in our advertisement columns.

### NOTES OF THE WEEK.

***Alstromeria pelegrina alba***.—This, one of the choicest of the species, is flowering capitably in a cool greenhouse at Shedfield Lodge. The pure white, delicately tinted green flowers are so pleasing, that it is a wonder this *Alstromeria* is not grown more largely.—E. M.

***Iris Cosnæ*** is a pretty Cushion Iris now flowering in Mr. Ware's nursery. It has a fine large flower, the standards clear yellow, with dark purple markings at their base, the falls of the same shade, pencilled with purple and with bright yellow crests. It is altogether a distinct and handsome flower.

***Lindelofia longifolia*** is a handsome spring-flowering, hardy plant of the Forget-me-not family, more robust than the old *L. spectabilis*. A bunch of it was noticeable in Mr. Barr's group at the Drill Hall on Tuesday. The flowers, of a deep rich *Gentian*-blue colour and nearly as large as those of the *Borage*, are freely produced on long leafy shoots.

***Iris nudicaulis*** is one of the best of the spring Irises, and, like *I. pumila*, makes charming groups and flowers with wonderful profusion. Mr. Ware has a quantity of it at Tottenham, and the plantations are a perfect sheet of rich purple flowers. These dwarf Irises ought to be popular plants, judging from their great beauty and easy growth in free, warm soils.

***Ixiolirion macranthum*** is a fine species well shown on Tuesday at the Drill Hall by Messrs. Barr. Its flowers, of a deep uniform blue colour, are large and long in the tube, and borne in fine

umbels on a long, stout stalk. *I. Pallasi* is another fine blue kind. The bulbs are best lifted every year, and planted again late in autumn rather deeply in light rich, well drained soil.

**Strawberry Scarlet Queen**.—Mr. A. Trail, The Gardens, Falsshaw Hall, Wilmslow, sends us some remarkably fine forced fruits of this Strawberry. The fruit is of medium size, bright scarlet in colour, the flavour brisk. Mr. Trail says he finds *Scarlet Queen* do well outdoors; the foliage has suffered less during the past winter than that of the other sorts which he grows.

***Anemone narcissiflora***.—This beautiful species is quite rare in gardens, and we were agreeably surprised to meet with it again flowering finely in Mr. Ware's nursery at Tottenham. It is a most distinct *Anemone*, producing its flowers in a truss at the top of an erect stalk 6 inches to 9 inches in length. The flowers individually are large, pure white, with a tuft of yellow anthers in the centre.

***Menyanthes trifoliata*** (the Bog Bean).—At the Tottenham nursery many aquatic plants are grown by adopting the simple expedient of burying half a cask, and the old Bog Bean is flowering well under this treatment. Although a native plant it is pretty enough to have in the garden, sending up its tall flower-spikes in advance of the leaves, the rose-tinted buds opening into pure white flowers.

**Strawberry Lesder**.—At the meeting of the Royal Horticultural Society on Tuesday another new Strawberry made its appearance, the second this season. The fruits in many cases turned the scale at 1½ ozs. This has a great deal of the old Pine flavour, so much wanting in many new varieties. This is the variety I noted last year as likely to make its way. It found many admirers on Tuesday and was thought to be a grand acquisition.—G. WYTHES.

***Cerssus pseudo-ceræus*** is one of the most noteworthy flowering trees of the present week. This species has a most distinct habit, quite different from that of the double forms of our native *Cherries*. It is practically an immense bush having no regular central stem, but long, rigid, ascending branches, bearing little side spurs now wreathed in flowers their full length. The flowers are semi-double and white suffused with rosy pink. This *Cherry* was figured in THE GARDEN of September 20, 1890.

***Atragene alpina***.—Among the climbing plants that flower in spring there are none more beautiful than this, and yet it is most uncommon. A graceful trailer and not over rampant in growth, it is suitable for low walls or fences about the garden. We have grown it on a low wall for years, and every spring it flowers with freedom. The past winter has not injured it in the least, and the flowers are now expanding in graceful wreaths and clusters of purple-blue. We saw a large batch of this *Atragene* at Mr. Ware's recently, and many of the plants less than 1 foot in height had several flowers, so that it blooms even in a young state. For a long time it was difficult to obtain this plant at all from English nurseries, but doubtless the coloured plate of it that was published in THE GARDEN of October 6, 1894, has drawn more attention to its beauty.

**Hardy *Cypripediums***.—Some well-grown, free-flowering specimens of these, in broad, shallow pans, that were shown in Mr. Ware's group at the Drill Hall attracted some notice. *C. Calceolus* (our English Lady's Slipper, but almost extinct as a wild plant) was in fine flower, its rich yellow lip conspicuous, owing to the peculiar brown shade of the sepals and petals, whilst it has a sweet scent. *C. pubescens*, also good, is an American kind, somewhat resembling the preceding and quite easy to grow in a damp, shaded spot with peaty or leafy soil. *C. occidentale* (or *montanum*, as it was labelled) is a Californian species of charming beauty. It has two or three flowers on a leafy stem, 1 foot in height. The sepals and petals are prettily twisted, of a brownish purple colour, whilst the neat-shaped pouch is white,

suffused with a faint pink shade and striped with pale red inside. It has proved quite hardy at Tottenham.

**Late Tulips for cutting.**—When at Syon House a few days since I saw in Mr. Wythes's house a handsome bowl filled mainly with the blooms of late Tulips. Associated with them were Lilac and one or two other flowers and some appropriate foliage, and the effect was delightful. The Tulips had been cut with long stems and when about three parts expanded, and they last fresh for a much longer time than is generally supposed. Gesner's rich crimson was among them, also several striking varieties of the Parrot group and the following, which deserve a place in every garden: Dame Elegante, white to pale sulphur, bordered with red, in the form of a feathering; Ida, or Bouton d'Or, clear deep golden yellow, a beautiful self of the finest form; and Picotee, white, with a fine beading of soft rose on the petal margins, as regular as in the case of a rose-edged Picotee. Three handsomer or more attractive garden varieties it would be difficult to name. Mr. Wythes plants masses of them on his hardy flower border, and also as a front line, where they are very effective.—R. D.

**Some good garden Tulips.**—Although we may question the wisdom of creating another name for what are really forms of the good old Gesner's Tulip, there can be no doubt as to their worth as garden flowers. The breeder Tulips in their self colours are lovely, but just as we have grown familiar with certain kinds we like, they break into odd bizarre mixtures of colour, and their garden value diminishes. The merit of these erroneously named Darwin Tulips is that they maintain their self colour for a more indefinite period, and thus for the future we can have tall late Tulips in the garden in many bright effective shades, all of the same stately character and bold beauty as the parent. Some fine kinds shown on Tuesday by Messrs. Barr are Gipsy Queen, dark maroon-purple; Purple King, also purple; The Sultan, darker than the preceding; Rouge Eclatante, bright red, with yellow base; Queen of Brillants, carmine-red with white base; Salmon King, soft light red; Scarlet Beauty, very bright; and Loveliness, all that the name suggests, clear bright rose in colour. If there is no self Tulip to surpass T. Gesneriana in its best form, we have at least in these varieties fit associates for it capable of giving much colour to the garden in May, and most welcome when the Daffodils are fading.

**Notes from Chester.**—After so severe a winter was there ever so lovely a spring? The profusion of spring bloom and the delicacy of the early foliage we never remember to have seen surpassed. The early-flowering trees and shrubs are very fine. We send you a box of blooms from representatives of but two botanical orders, which may fairly typify the glory of gold and silver and the prettiness of pink and white with the intermingling green about us in the spring garden. *Cytisus schipkensis* is one of the most delicate and striking of the legumes in flower just now. Its terminal flowers of pure white, surrounded with delicate foliage like an involucre, are admirable for cutting. It is perfectly hardy. *C. austriacus*, with its dense inflorescence gracefully arranged along the shapely flowering stems, and its compact foliage placed on short pedicels, is very telling, and either in bush form or as standards makes an effective show. *C. purpureus incarnatus* is a splendid contrast in colour. The purple flowers tinged with red are showy in broad masses, whilst the individual sprays are remarkably graceful and telling. The *Genistas* are all full of showy colour. We send two. *Genista pra-cox* is, as you will see, simply a golden shower. The effect of a mass of bloom standing out upon a lawn or within the shrubbery can hardly be described. *G. prostrata* has all the floral beauty of the Broom. The chief interest and value of *G. prostrata* lie in its remarkable prostrate habit, making it invaluable for certain situations for rockwork and the alpine garden. *Caragana pendula* is a never-failing

source of delight to the garden lover. Some of the standards here are simply laden with trails of gold and green, and there is no more conspicuous feature in the shrubbery edging the lawn. *Prunus sinensis alba plena*, with its snowy covering, is delicate and effective. As a pyramid or a standard it is equally desirable, and makes a pretty show. *Pyrus malus* in varying forms is lovely. The tinge of pink sets off the delicate beauty of the ground colour of the petals, and the slender and refined form of the buds and blossoms is charming. The Daffodils here have been remarkably fine from Easter onwards.—DICKSONS, Nurseries, Chester.

## PUBLIC GARDENS.

**Chrysanthemums in the Temple Gardens.**—It has been decided by the Temple authorities to discontinue for the future the annual exhibition of Chrysanthemums, which has now for a number of years formed a regular autumnal attraction in the Temple grounds facing the Thames Embankment.

**Opening of a new park at Willesden.**—On Saturday afternoon Roundwood Park, Willesden, was declared open to the public by Mr. Littler, Q.C., chairman of the Middlesex Sessions and of the Middlesex County Council. Mr. Pinkham, chairman of the district council committee, gave a brief outline of the preparations that have been made by the council. Twenty-six and a half acres of land, forming a conical hill overlooking Dollis Hill, Wembley Park and Tower, and all the public buildings of Willesden, were offered to the old local board for £15,000, but they declined to spend more than £14,000. One of the proprietors gave £500; the other £500 was raised by public subscription, and the ground was bought. Fourteen thousand five hundred trees and shrubs have been planted, and £9000 has been spent in laying it out, the drainage being especially difficult and costly.

## OBITUARY.

**Death of Mr. Thomas Hogg.**—By the death on Monday last at Berwick, at the age of 73, of Mr. Thomas Hogg, senior partner of the old-established Border seed firm of Hogg and Wood, Coldstream, the nursery trade of Scotland loses one of its most prominent figures. Along with Mr. Jas. Robertson, of Malahide, he founded and carried on the business so well known in Dublin under the style of Hogg and Robertson. He was also a director of Lawes Chemical Manure Company, Ltd.

**The late Mr. John Walker.**—To the brief obituary notice of Mr. J. Walker on p. 334 I venture to add the fact that at the age of fourteen years he came to Thame, and entered the service of his uncle, who was a grocer. While following this occupation his love for flowers led him to cultivate some of the pets of the florist in those days, and having made a reputation as a grower and an exhibitor, he in 1846, while remaining in the grocery trade, also established himself at Thame as a florist, commencing with about twenty poles of ground and a two-light frame. So successful was the venture, that in course of time it grew to thirty acres, a good quantity of glass, and two seed shops. The principal home nursery was known as the Lashlake Gardens, and here in a spacious lean to house he grew some of the finest and richest coloured Maréchal Niel Roses, which found their way into the London markets. Originally a Tulip grower and exhibitor in the days when the flower was somewhat extensively grown in the south, he still kept a collection, and a year ago brought to one of the meetings of the Royal Horticultural Society some very fine flowers, the flamed bizarries being particularly attractive. He put several new Peas into commerce, one of the most useful being that fine late variety Walker's Perpetual Bearer. It was he

who originated the Sugar-loaf Bath Cos Lettuce, the Exhibition Onion, &c., and he was famous for his very fine strain of quilled Asters, of which he raised several very fine varieties, and Sweet Williams. He was a most successful cultivator and exhibitor of Dahlias, and his white self John Walker is probably the best white Dahlia in cultivation. About forty five years ago he with others originated the Thame Horticultural Society, of which he remained one of the hon. secretaries till his death. The business will be carried on by his son, Mr. Stephen Walker.—R. DEAN.

**Royal Horticultural Society.**—We have been asked to state that the usual committees—fruit, floral and Orchid—will meet at the Temple Gardens at 11 o'clock on Tuesday, May 21, and that certificates and awards of merit will be given to new and rare plants if worthy. The official list of such awards will be issued from the secretary's tent on Wednesday, May 22.

**The weather in West Herts.**—Another unseasonably warm week and the fourth in succession. On six days this month the temperature in shade has risen above 70°, and on three of these above 74°; whereas the average maximum for May is only about 60°. The highest reading as yet recorded this year was 77° on the 13th. The preceding night was also warm, the exposed thermometer never falling lower than 49°. Rain is now much wanted in the garden, less than a tenth of an inch having fallen during the last nineteen days, while no measurable quantity of rain water has come through the 2½ feet of soil in either of the percolation gauges for eleven days. The atmosphere has again been very dry; indeed, the average difference at three o'clock in the afternoon between the reading of an ordinary thermometer and one with its bulb kept constantly wet was as much as 14° for the week ending the 12th inst. Since the beginning of the month the sun has shone brightly for ten or more hours on ten days, and on four of these for over thirteen hours. A Lilac came first into flower in my garden on the 8th, which is two days earlier than the average for the same tree in the previous nine years, but eighteen days later than last year. The only Rose which has yet flowered is *Rosa pyrenaica*, which was out on the 13th inst.—E. M., *Berkhamstead*.

**Book on British seaweeds.**—"Manual of the British Marine Algae," by Professor Harvey (Van Voorst). Many plant-like animals are commonly, but wrongly, called seaweeds; for which get Landsborough's "Popular History of British Zoophytes" (Reeves and Co). Much interesting information on both these subjects will be found in "Common Things of the Sea Coast," by Anne Pratt (Society for Promoting Christian Knowledge); "Glaucus, or the Wonders of the Shore," by Charles Kingsley (Macmillan); "Sea-side Walks of a Naturalist," by Houghton (Groombridge); "The Aquarium, or Unveiling of the Wonders of the Deep Sea," by Gosse; "The Sea-side Book," by Professor Harvey; "A Naturalist's Rambles on the Devonshire Coast," by Gosse; "A Handbook to the Marine Aquarium," by Gosse; "Tenby, a Sea-side Holiday," by Gosse (the last five works published by Van Voorst).—W. T. B., *Bishopstington*.

**Names of plants.**—*W. Butt*.—1, *Staphylea colchica*; 2, *Raphiolepis ovata*.—*Oakenhead and Co.*—1 and 2, impossible to name from such scraps; 3, looks like a Lupin; send when in flower.—*G. B. Anderson*.—*Epimedium pinnatum*.—*S. N. T.*—1, *Dicentra eximia*; 2, *Spiraea Thunbergii* fl.-pl.; 3, *Meconopsis cambrica*; 1, *Asperula odorata*; 5, *Ane-mone sylvestris*; 6, *Euphorbia lathyrus*.—*J. M. S. P.*—*Fritillaria pudica*.—*Geo. Goldsmith*.—1 and 3, *Fritillaria recurva*; 2 and 4, too far gone to determine.

**The Wild Garden: or, the Naturalisation and Natural Grouping of Hardy Exotic Plants, with a chapter on the Garden of British Wild Flowers.** Fourth edition, with wood engravings from drawings by Alfred Parsons, revised and enlarged. Tenby 8vo, linen cloth. Price 12s.; well bound in half morocco, 18s. Through all booksellers.

No. 1227. SATURDAY, May 25, 1895. Vol. XLVII.

"This is an Art  
Which does mend Nature: change it rather; but  
THE ART ITSELF IS NATURE."—*Shakespeare.*

## ORCHIDS

## CYPRIPEDIUM BELLATULUM.

ALTHOUGH a much better grower than some of the nearly-related kinds, this pretty species is not always satisfactory, and what is more remarkable is that in some places where apparently no particular trouble is taken in its cultivation it grows vigorously, while other experienced and assiduous cultivators do not make much of it. I have never been able to grow this species in peat and Sphagnum alone, but have been successful with it in a mixture of light fibrous, not sandy loam, chopped Sphagnum, charcoal, and finely broken crocks. Nodules of limestone I usually mix with the compost, but it is rather suggestive that the best plants I ever had were grown without it, so that perhaps there is not so much virtue in the limestone—other than as an aerating agent—as has been claimed for it. I would not advise anyone who had been successful with this material to discontinue its use, but I do not think it is by any means a panacea for all the ills that *C. bellatulum* and its allies are heir to. This Orchid is very susceptible to checks from fluctuations in the atmosphere, a constant and regular temperature being necessary to its well-being. A strong heat is also essential, and the plants must be screened from bright sunshine. The supply of moisture must be ample both at the roots and in the atmosphere, but no water must be given over the foliage, nor must it be allowed to collect about the base of the plants. This danger is obviated by elevating the plants a little, keeping the centre of the compost higher than the sides, and in the case of newly-imported plants this must always be practised.

*C. BELLATULUM* is a native of islands in the China Sea, and was introduced in 1888. On strong plants the leaves are from 8 inches to 10 inches in length, dark green, with a glossy-looking upper surface most beautifully tessellated, the reverse purplish red. The scapes are frequently twin-flowered, the blossoms being upwards of 3 inches across, usually white in ground colour, irregularly spotted with blackish purple. This flowers at various seasons, but usually during the spring and early summer. Another pretty species belonging to this section is

*C. CONCOLOR*, a smaller growing, but charming kind, requiring somewhat similar treatment. The blooms are produced on one or two-flowered scapes towards the end of the summer. The sepals and petals are concave, the lip small, the entire flower yellow with bright red spots. The leaves, each about 4 inches in length, are green and prettily variegated, the under surface purple. This was introduced in 1864 from Moulmein.

*C. GODEFROYÆ* is another pleasing kind, which grows about 6 inches high, the leaves being of varying shades of light and dark green on the upper surface, bronzy purple beneath. The flowers, borne on short stems, usually singly, sometimes in pairs, are white, with small dots of purple on the labellum and larger spots on the sepals and petals. It flowers in summer, and is a native of New Guinea and adjacent islands. Introduced in 1883. Another delightful species of this set is

*C. NIVEUM*, a dwarf-growing, free-flowering Orchid, a native of islands about the Malay Peninsula. The blossoms are pure white with

the exception of a few indistinct dots of red; the leaves are dull green, with a deep purple reverse. It flowers in May and June, and sometimes produces twin-flowered scapes.

All the above deserve a place in the most limited collections, as they are distinct and beautiful kinds. Some very fine hybrids have been raised from among them, and no doubt many more will be heard of as the seedlings come into bloom. R.

## CATTLEYA MENDELI.

This fine *Cattleya* belongs to the labiata group, and is a decided acquisition to that section, having flowers of large size and very brilliant in colour. These are produced during the months of April, May and June. In this group of *Cattleyas*, which also includes such species as *C. Trianae*, *C. Mossiae*, *C. Percivaliana*, *C. gigas*, &c., are to be found the finest in the genus, and there is no season in the year in which one at least of the different kinds is not to be seen in bloom. The species here referred to was introduced by Messrs. Hugh Low and Co., of Clapton, about fifteen years ago from the Cordillera of New Grenada, where it is often found growing in very exposed situations upon bare rocks. It was named in honour of the late Mr. Sam Mendel, of Manchester, at that time a very enthusiastic Orchid grower, and I believe it flowered for the first time in this country with Mr. Day, of Tottenham. *Cattleya Mendeli* has short clavate pseudo-bulbs, which each support a solitary deep green leaf. The flowers are produced on growths or bulbs that have been formed the preceding season, before the usual period of rest. In this respect it resembles *C. Trianae* and *C. Mossiae*. Such kinds as *C. gigas* and *C. Dowiana* flower from bulbs which have been formed during the current season. These blooms vary in colour, ranging from pure white to quite a deep shade, the rich purple and yellow of the lip being a very characteristic feature. The culture of this *Cattleya* is similar to that of all others belonging to the labiata group. It should be grown in a temperature of about 60° during the winter months, allowing it to fall about 5° less in the night, which as the season advances may be allowed to rise gradually until about 70° are reached in the summer. A thin shading will be found necessary during very hot sunny weather, but the plants should be placed so that they can receive as much light as possible. Care should be taken not to overpot these plants, and water should at all times be given with care. A good typical form of *Cattleya Mendeli* may be described as having flowers from 6 inches to 8 inches across, the sepals and petals white or delicately tinted with rose, the latter much broader than the former. The lip is very large, beautifully frilled at the margins, and of a rich purplish crimson, with a large yellow disc. Shortly after its first introduction it was also imported by Messrs. Backhouse and Sons, of York, and since by various other firms. Many fine and distinct varieties have appeared, these being distinguished by the colour of the flowers, and all decidedly worth a place in every collection.

*C. MENDELI BELLA*.—This is a very pretty kind, the sepals and petals pale lilac, the lip having a rosy mauve shade. It is a distinct and scarce variety, and was well represented in the collection of the late Mr. George Hardy, of Timperley.

*C. M. BLUNTI* is the albino of this species, and must be classed amongst the finest of all white Orchids. The flowers are of the purest white throughout, excepting a very small blotch of yellow on the disc of the lip. It still remains an ex-

ceedingly rare and valuable plant. It is named after the collector who discovered it several years ago, and sent it to Messrs. Low and Co.

*C. M. GRANDIFLORA*, as the name implies, is a very large-flowered variety, and at the same time has also very richly coloured blooms. The sepals and petals are white, very broad, and of fine substance; the lip large, deep rosy magenta, the yellow throat veined with rosy lines and the margin heavily frilled, where it is also margined with white.

*C. M. JAMESIANA* is another very distinct and richly coloured form, having the sepals and petals deeply shaded with rose, the latter distinctly blotched at the apex with a richer hue; the lip is bright amethyst-purple, the yellow portion very deep golden, veined with purplish lines. Another very beautiful variety is

*C. M. MORGANIE*, which is sometimes known under the name of *Cattleya Morganie*, but it is not distinct enough to bear a specific name, although as a variety it is one of the best. The flowers are of fine form and size, of the purest white, with a bright blotch of magenta near the apex of the lip, and a few radiating lines in the yellow throat. There appear occasionally some kinds which are decidedly worthy of varietal names, and amongst these must be mentioned two very distinct forms, which were recently shown at the Royal Horticultural exhibition in the Drill Hall. One is

*C. M. LEUCOGLOSSA*, a very distinct and elegant form, having delicately flushed sepals and petals, the large frilled lip pure white, veined with yellow in the throat. This is, no doubt, the nearest approach to *C. Blunty* above mentioned. This appeared in the collection of Mr. T. Statter, of Manchester. The other one shown at the same meeting was sent from the Rosefield collection at Sevenoaks and was named

*C. M. PRINCESS OF WALES*, a very charming and distinct form, the sepals and petals shaded with rosy pink, the well-formed lip having a very brilliant blotch of purplish crimson and golden yellow in the throat. Wm. HUGH GOWER.

## CLEANING ORCHIDS.

ALTHOUGH to the uninitiated the present may seem a peculiar time to be treating of cleaning Orchids, more experienced growers know full well the importance of giving the young growth a good start by ridding it of insect pests now, when these are coming from their winter quarters and instinctively finding the young growing shoots. In the East India house it is surprising how quickly the small white or brown scale spreads over the leaves of the distichous-leaved Orchids, and no better time can be found for clearing them than when they are young, their hold on the plants becoming more tenacious as the season advances. In consequence of this more force has to be used to remove them and the foliage is often bruised or punctured. At this time of year it is not advisable to use insecticides to any extent, frequent spongings with clear, tepid rain-water being quite as effective and less dangerous. When the insects are down between the axils of the leaves and the stem it is difficult to reach them with the sponge alone, and a small-pointed stick with a piece of chamois leather tied firmly to the top is often very useful, care being taken that the point of the stick does not protrude. A small black scale with a white lining often attacks *Cypripediums* of the *barbatum* and *venustum* types and is often seen in conjunction with red spider. Fumigations lessen their numbers considerably, and are always advisable if the insects are plentiful, carefully sponging afterwards. White scale on *Cattleyas* must now be looked for, as the young foliage, if once overrun with this insect, will always show the spots. It is frequently found clustering around the base of the pseudo-bulbs, about the rhizomes and dormant eyes, and should be rubbed off carefully with a pointed stick or stubby brush, the plants being afterwards forcibly syringed with tepid water. A soft, woolly insect of the *Cocco*s tribe—somewhat resembling mealy bug

but even more fecund—is very partial to cool house Orchids; and this, too, must be kept under, or the health of the plants will suffer. In examining the plants for insects a hasty look through the houses is not sufficient. Each plant must be taken and the undersides of the leaves carefully examined, for this is where the insects are chiefly found. In all cases where it may be found necessary to fumigate, this should be done lightly on two consecutive nights, as greatly preferable to one strong dose, and the syringe must be freely plied among the plants the next morning, air being given earlier than usual and the blinds let down before the sun reaches the house. This must not be undertaken unless necessary, green fly on the flower-spikes being usually got rid of by passing a damp sponge over them daily. H. R.

**Phalænopsis sumatrana.**—This very interesting species of the Moth Orchid usually produces its flowers during the months of May and June. It has always remained a rare plant, although introduced about 1864. The blooms, carried upon an arching spike—usually from six to nine upon a raceme—individually measure about 2 inches in diameter. These are not so showy as many in this beautiful genus, the sepals and petals being somewhat narrow, of a creamy white colour, whilst the lip is also of a creamy white, with a few purple lines on the front and a few orange spots on the side lobes.—W. H. G.

**Vanda parviflora.**—This very remarkable plant is generally known under cultivation as *Aerides Wightianum*. In growth it much resembles *V. Amesiana*, although the leaves are thicker and very fleshy. It is widely spread over a large portion of India and Ceylon, and has been imported on many occasions with other Indian and Burmese Orchids. It was introduced into our gardens about 1844, and was then named by Dr. Lindley as above. It has, however, various other names, such as the one just mentioned, which was also given it by the same authority as was *Aerides testaceum*, whilst Professor Reichenbach in 1877 named it *Vanda testacea*. The raceme is erect and many-flowered, the sepals and petals spreading, of a brownish yellow colour; the lip is three-lobed, the middle lobe large and spreading, white, stained and spotted with purplish mauve, and with raised lamellæ on the disc, the spur being of medium size. It requires strong heat to grow it under cultivation, as do most of the Orchids coming from this part of the globe, with plenty of moisture in the atmosphere.—W. H. G.

**Dendrobium thyrsoiflorum.**—Among recent importations of this species a great deal of variation exists in the flowers both in shape and colour. The typical form has the sepals and petals clouded white, the lip yellow of varying tints. From a small consignment of this Orchid received two years ago there are now several varieties in flower; one has very loose racemes, the blossoms being individually very large, the sepals and petals suffused with rose, the lip bright orange. Another pretty variety has the petals distinctly erimped on the edges, the colour being of the purest snow-white, and there are one or two others more or less distinct from the type. There are few more useful Orchids than *Dendrobiums*, and none more ornamental than *D. thyrsoiflorum* and the closely related *D. densiflorum*. Their culture is of the simplest description, and they thrive in an ordinary plant stove if care is taken to give them the proper resting and growing seasons. If there is not proper convenience for ripening the pseudo-bulbs, the plants may be taken out of doors when the growth is complete in August, and a month in the open air is of the greatest benefit to them, the slight check serving to make them flower more freely. During winter the temperature may be kept at from 45° to 50°, allowing just sufficient water to keep the pseudo-bulbs plump. The best season for repotting is directly the flowers are past, watering carefully until new roots are being emitted. The pots used should be large enough to accommodate the plants for three or four years, as they dislike frequent disturbance.—R.

## NOTES OF THE WEEK.

**Dracæna Godseffiana**, shown by Messrs. Sander at the Temple, and also certificated, is a striking kind, prettily variegated, but really more like a Bamboo, especially in its new growths, which are pointed, and enveloped in leaf sheaths like the canes of an *Arundinaria*. The leaves are oval, broad, about 2 inches in length, of a dark green colour, beautifully blotched and spotted with pale yellow.

**Incarvillea Delavayi.**—This new hardy plant from China was shown with fine flowers by Sir Trevor Lawrence at the Temple, and a first-class certificate was granted. It has long pinnate leaves and flowers borne on stout, erect stalks 9 inches high, there being from three to five flowers and buds on a stalk of the plants shown. The flower in shape resembles that of a *Martynia*, but the lobed petals are large and smooth, of a bright rose colour, the throat pale yellow.

**Clematis coccinea hybrids.**—Six fine distinct kinds of these were shown at the Temple by Messrs. Jackman and Son. This new race will be useful in gardening, as the varieties all have the hardiness and long-flowering character of the parent they most resemble, namely, *C. coccinea*. Duchess of York, which received an award of merit, has a lovely pale bluish flower, deeper tinted down the centre of the petals. Other good new kinds were Sir Trevor Lawrence, deep crimson; Duchess of Albany, lilac-rose; Grace Darling, deep rosy carmine, and Crimson Beauty.

**Calochorti.**—Even lovers of flowers know little of this quaint and charming family, but Dr. Wallace, of Colchester, is extending their popularity, and his exhibit at the Temple show, though small, as the season is yet early for these flowers, attracted many visitors. *C. Benthami* was much admired with its clear canary-yellow flowers covered with hairs inside, each petal having a dark purple blotch at its base. *C. lilacinus*, light purple, with large flowers; *C. coerules elegans*, pure white, the hairs of a purple tint; and *C. collinus*, having large flowers widely expanded, of a clear lilac shade, were all shown well.

**Good market Pelargoniums.**—The zonal Pelargoniums are largely grown by Messrs. Hawkins and Bennett, of Twickenham, who, like other growers of special flowers for market, rely upon few kinds, but grow these in enormous quantity. Of double red-flowered zonals the best for market work is *F. V. Raspail*, but a new kind not yet in the trade that Messrs. Hawkins and Bennett are growing will eventually prove a strong rival to the above-named kind. Its name is Duke of Fife, the colour bright crimson, the flowers individually very large in a bold truss borne on a long stout stalk, whilst its growth is all that can be desired. A free, neat-flowering, dwarf-growing double white variety that finds favour is Silver Queen. In single red-flowered varieties some of our old favourites still hold a high position, Henry Jacoby, West Brighton Gem, and John Gibbons being very popular, whilst Ferdinand de Lesseps, rich crimson, is found equally good. Lady Chesterfield was fine, with large trusses and flowers of a lovely salmon colour. In pink nothing is better than Constance, and there is a great demand for flowers of this variety this year. Niphetos is well named, as there is nothing in white single kinds to beat it for freedom and purity of colour.

**Notes from Baden-Baden.**—Some time ago *Fritillaria Thomsoniana* was nicely in flower. It has all the appearance of *F. macrophylla*, but does not seem to be identical with this; it is a much stronger plant, carrying on a thick stalk 3 feet high as many as 32 of its pink flowers. *Iris mesopotamica* is new; it resembles *I. sindjarensis*, but the flowers are pure white. *I. vaga*, which is different from *I. Leichtlini*, is very showy; it is very robust, 2 feet high, and the flowers have

shades of nut-brown, blue and rose. *I. bosniaca* with its pure yellow large flowers is one of the earliest and has much improved under cultivation. Just now *I. bracteata* and *macrosiphon* from the Pacific coast of United States are in great beauty, some strong plants carrying as many as twenty flowers open at once; they open of an ochraceous yellow colour with a maroon network and become white, the network changing to rose; they are very striking indeed. In quiet beauty with an aristocratic air stands *I. cashmeriana* with its large highly perfumed flowers. On the rockwork *Onosma albo-roseum* var. *macrocarpum* shows its large drooping bells from white to cherry-red and crimson. What a pretty flower *Habranthus andicola* is! Outside and half of inside not violet, but brilliant magenta-red, having inside a yellow ring and a black throat. It is a charming flower and the bulbs may prove even harder than those of *H. fulgens*.—MAX LEICHTLIN.

**Heuchera sanguinea.**—This is one of the best hardy introductions of recent years, the colour of the flower being distinct and rare in gardens, a pure red, without any suspicion of a taint either of blue or yellow. I think Mr. Smith, of Newry, was the first to add one of the inevitable nursery epithets to the plant—splendens, if I recollect right—and one of his plants which I had was certainly deeper in colour than the introduced type, but seedlings vary much in colour, and I have some which are nearly white; not that a white *H. sanguinea* would be desirable, but it shows how the colour may be varied by judicious selection. The plant in warm summers ripens seed freely, and occasionally I find them self-sown. The seedlings require patience, being slow of growth, but they want very little attention, and until they have flowered are decidedly harder than old plants. The species, being Californian, dislikes the cold damp alternating with frost of an English winter, especially in the stiff clay of Cheshire, and does best in a light, well-drained soil. Many gardeners complain that it is a shy flowerer, but where shelter from cold blasts and suitable soil are given it flowers very freely indeed in my garden, and never more freely than now. I must add that old plants in exposed situations are nearly destroyed, but masses of seedlings by their side are unharmed. In conclusion, this is a plant which requires frequent renewal, whether from seed or cuttings.—C. WOLLEY-DOD, *Edge Hall, Malpas*.

**Shrubs in Kent.**—I was glad to see some reports of the result of the winter in THE GARDEN last week. It would be interesting to have them if possible from all parts of the country. I presume we should find that the usually most favoured counties have suffered most severely. Here in the weald of Kent, about 300 feet above the sea, we have not very much to complain of, with the exception of the *Cistus*s, which are all dead. Though many things are injured, we have lost little. *Escallonia macrantha* and *E. philippiana* on walls are cut hard back and the former in the beds cut to the ground. *Abutilon vitifolium*, *Berberis Darwini*, *Pernettya*s and a shrubby *St. John's Wort* (which makes a shrub 4 feet high) are cut to the ground, but are shooting up from the bottom. The same may be said of the Gorse and Broom, both common and the varieties. Many deciduous shrubs—*Judas Tree*, *Leycesteria*, *Rhus Cotinus*, *Bladder Sennas*, &c.—have lost a foot or two all over, but are starting well. *Choisya ternata* on walls is not touched; in the beds it has lost its leaves, but is breaking all over. On the house, *Roses Lamarque*, *Fortune's Yellow* and *Waltham Climber* are cut down, but seem likely to recover. Some Laurels moved in the autumn are cut hard, but are breaking all over the stems. A few *Rhododendron ponticum* in a very exposed windy corner are a good deal browned, but as they seed and grow like weeds in the woods here, it does not much matter. Last, but not least, a *Chamaerops excelsa* which has had no protection for two years shows no sign of frost, and *Camellias* on the walls of the house are untouched; some small ones in the beds have lost their leaves. Altogether, think we may congratulate ourselves.—MEDWAY.

### OF SOME OLD GARDENS AND THEIR FLOWERS.

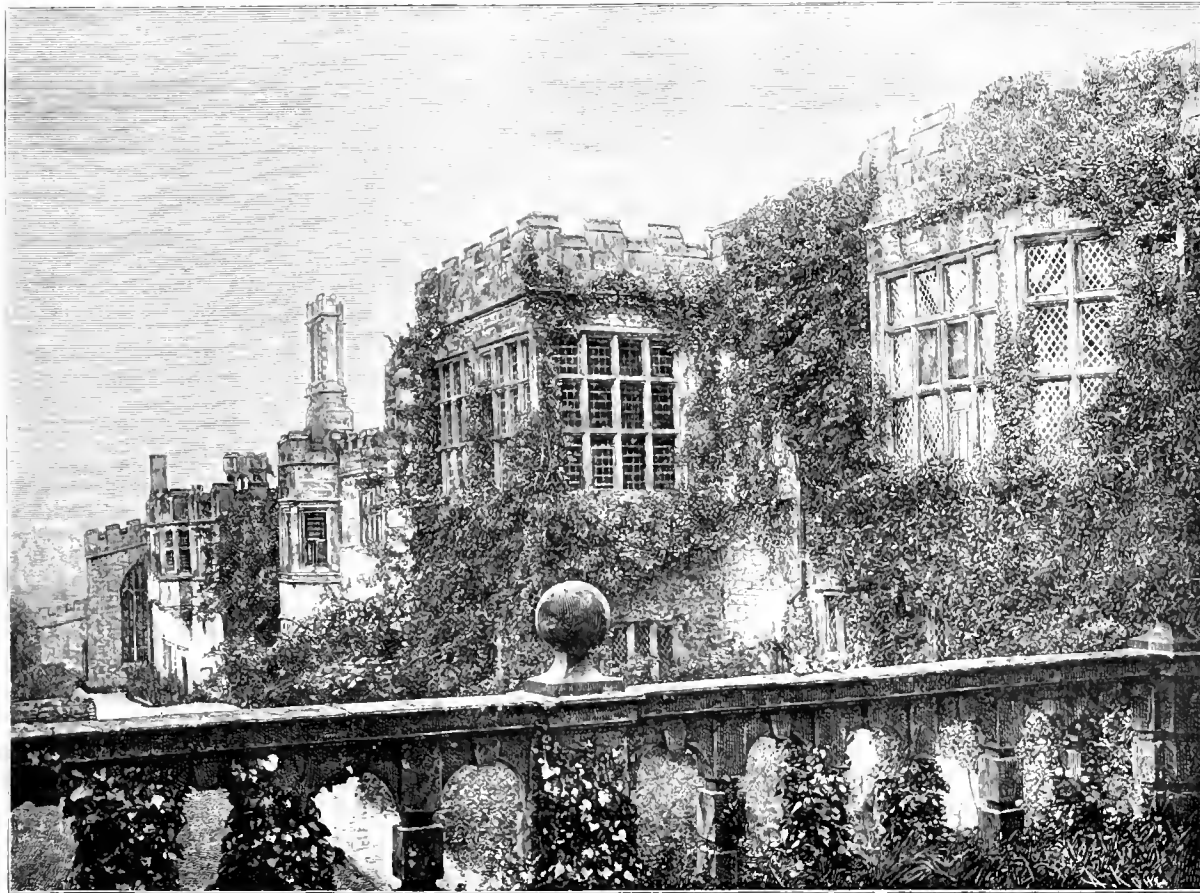
OUR chances of studying the best features of old gardens are very much lessened owing to the changes that took place a generation or two ago, when the taste for the newly-found effects of ribbon gardening led to many changes of plan and to the destruction of old parterres and flower gardens. But, so far as we know them now, it may be safely said that their charms are in nearly all cases greatest where they are disposed more with regard to the ground itself and the house than where the ground has to conform to any fixed idea as to style. We see evidence of this at

world, the walls afford such admirable backgrounds for flowers of the right sort. There is no house takes a better colour than the old English house; none so precious for a background. How very different the stucco or hard brick or other house new or old; with these the common style of carpet gardening may not seem so incongruous. It is when we come to see it displayed before a beautiful old house that its hollow pretensions are almost painfully evident. For of what value are silver-lichened walls 300 years old or more to us if there be but a few lines or masses of Lobelia and such trivialities in front of them? From such things, no matter how disposed, we get what artists term "hardness" and showy

only artistic ones; the way may vary much according to soil or climate, but beautiful results near a house can only be got through more enduring planting than is now the rule. It should not require much to prove that in every way a bed or group of such a Rose as Bouquet d'Or, with its free and handsome shoots, would be far more delightful near an old house than any plant of summer growth only, and yet we see it stated now and then that once a parterre (of the ordinary sort), always a parterre, and that we must not venture on any free and lasting planting near the house.

It is, however, one of the most puerile of errors; there is no good reason why we should not return to as lasting ways of planting as ever the old gardeners employed. On the contrary, there are reasons why we should do much more of it, because we have a greater choice of beautiful evergreens and long-lived plants of various sorts which have also the precious qualities of beautiful bloom, as in, say, the case of the climbing Tea Rose, the choicest hardy Rhododendrons, and such evergreens as *Andromeda japonica* and *Kalmia latifolia*. Large flower gardens of all kinds would be greatly the better of being broken up with groups or masses of such things, which among their other merits would enhance the value of the flower masses.

And going to larger things still, why should they be excluded from the flower garden where there is room for them? I remember at Knole years ago seeing a beau-



*Haddon Hall. Engraved for THE GARDEN from a photograph sent by the late Mr. J. L. Robinson, C.E.*

Powis, Ightham, Naworth, Berkeley, Cotehele, Knole, Penshurst, and other places. Every old garden is not excellent in plan, as the most simple means of improvement are often neglected in such places, but generally they illustrate the point insisted on, that the happiest results are got where the ground itself is thought of first and most. This is nowhere more clear than in a few places where a very modern garden has been made near an old house, but where some of the old gardens remain. For instance, the modern flower garden at Drayton is distinctly less charming than the older parts of that beautiful garden.

About these fine old houses the opportunities for flower gardening are the best in the

colours. But showy colour is not always good colour either in pictures or in gardens, and some of the most beautiful pictures both in gardens and otherwise are where the brilliance is in due relation to other things of equal importance. Some of the most vivid pictures of the master landscape painters are got by a modest amount of high colour in its right place, and so it should be in gardens.

But it is not the colour only we have to think of in these old gardens, as we miss beautiful and varied forms of stems and mass of foliage when we use only the short-lived summer flowers.

For all such houses and for all beautiful houses permanent ways of planting the beds are the best, and indeed the

beautiful group of the Swamp Magnolia (*M. glauca*) in flower the like of which I have never seen since. There is too much neglect of beautiful flowering shrubs, and one cause of this is their needless exclusion from the flower gardens of the day.

If this be true of the beds and borders of the garden, it is even more so of the walls. About old houses they are more than ever precious from their colour and material, and from a flower garden point of view it is folly to neglect them, and no care is too much to give to select the noblest plants for them, in due relation, of course, to climate and soil. Unfortunately, it has been too much the rule with architects who make gardens to forbid the planting of the walls—the surest way to

make a garden "hard" and without real beauty. It was not the case in really old English gardens of which the walls were well set with climbers. Now we have a much larger choice of beautiful wall plants, many of them in our climate distinctly better for the warmth and shelter of the wall, as is the evergreen Magnolia on many an old house. Were it not for the trees of this planted on the walls of old houses and old gardens, we should not in our country ever see in flower the noblest of evergreen flowering trees. The double Pomegranate is another example of a brilliant flowering shrub which may be bloomed well against warm walls, but which is far too rarely planted thereon. The variety of aspect round our large old houses like Drayton helps also towards getting the best effects on such walls, which indeed about some old houses are a garden in themselves. Indeed, some of our pleasantest souvenirs of gardens are of wall plants as at Ollington, where so many rare shrubs are on the walls, and in the College Botanic Gardens at Dublin, where there are such picturesque effects from the growth of a great variety of plants which cover the walls admirably, and at the same time are never stiff, but garland them with charming grace.

W. R.

## FLOWER GARDEN.

### NARCISSUS CULTURE IN THE ISLES OF SCILLY.

As on a fine April evening one steams to the south-westward from Land's End, and descends on the horizon the little group of islands that lie in the sunset, it is hard to persuade oneself that it is from them that London and most of the provincial towns of England draw their chief supplies of Narcissi during the winter. When, however, the *Lynesse* makes fast to the wharf at Hugh Town, St. Mary's, and the piles of white wooden flower-boxes are seen lying there, tier upon tier, an idea of the magnitude of the traffic forces itself upon the traveller, and if he should stay to see the steamer discharged, he will find that nine-tenths of the cargo consists of empty boxes returned by flower-salesmen from all parts of England. The industry, in which almost every occupier of ground in the Scillies is now concerned, is the chief, one might almost say the sole, trade of the islanders. Conceived by Mr. Dorrien Smith, the proprietor of the islands, and fostered by his judicious care, it is now so firmly established that nothing short of a reversal of the taste for cut flowers during the dark days of the year on the part of the town dwellers of the mainland is likely to affect the prosperity of the Scillonians, for with the mild and equable climate which the islands enjoy, competition is practically out of the question.

The one enemy that has to be contended against is the wind, and to counteract its baleful influence, lines of shelter in the form of hedges, walls, palings and reed fences are to be seen at distances of a few yards in the Narcissus fields. In St. Mary's the hedges are almost entirely composed of *Euonymus*, this standing the winter well and providing a good protection. On Treseo, on the other hand, *Escallonia macrantha* takes the place of *Euonymus* as a shelter plant, and covered, as it is in

the late spring, with pink flowers, the guardian hedges are themselves objects of beauty.

A walk round the island of St. Mary's in the early morning soon illustrates the hold that flower culture has upon the island. Carts are driving to and from the quay, coming in with full boxes and going out with the returned empties. Here, one comes upon three boys and a man picking *N. poeticus ornatus* in a small enclosure. Already several large heaps of the white blooms lie at the foot of the hedge, and, while we wait, a young woman crosses the road, fills a basket with flowers, and takes it to a lean-to glasshouse that adjoins an unpretentious granite built cottage. Following her, we find that the greenhouse shelves are already more than half filled with thousands of cut Narcissi in water. Continuing our walk, we see in small fields lines of dark red Wallflower, which men are busily gathering, bunching and placing in hampers. A light-coloured patch in the next enclosure turns out to be a colony of white Stocks, and further on in a cottage garden, a wide bed of Arums appears between masses of Grand Monarque and *poeticus ornatus*, which are now in full beauty; but Wallflowers, Stocks, and Arums together do not occupy one-twentieth part of the ground that is devoted to the growth of Narcissi, and their culture may be regarded as merely a tentative experiment. On every side the waving blue-green leaves are to be seen, bed after bed and field after field, of Narcissi. Even beneath the very ramparts of the disused battery they grow, sheltered by rude palings of barrel staves from the wind and the sea which they overhang. Though the island is not covered with glass to the same extent as Guernsey, many glasshouses have been erected during the last few years, which serve the double purpose of forcing the bulbs for early flower and providing well-lighted packing sheds. It is, however, not until the island of Treseo is visited that the industry can be studied in its highest development. Here, at Mr. Dorrien Smith's flower farm, no outlay that may lead to the commercial advancement of the trade is spared. No innovation is too unimportant to be tried and, if approved of, adopted.

Close to the bulb fields are two blocks of ridge-and-furrow glasshouses, each block containing five houses, the total run of the ten houses amounting to 15,000 feet. These are heated by horizontal tubular boilers, and in them during the winter thousands of boxes of Narcissi are forced on temporary staging erected over the hot-water pipes. As the boxes are taken out in the spring they are placed in the open and the bulbs ripened off, when they are planted again and are ready for another forcing in two years' time. As soon as the bulbs are cleared out, the staging is taken down and the houses are filled with Tomatoes, which are grown exclusively in pots and which, on April 16, were just commencing to colour. By the time these have to be removed to make way for the staging on the approach of winter a good crop has been obtained, about 15 tons having been cut during 1894. Close to the glasshouses stands a large packing shed about 200 feet in length. In the interior, along the front, the upper portion of which is glazed, runs a wooden trellis supported on a shallow water tank, and through the interstices of the trellis-work the stems of the cut Narcissi are inserted, thus enabling them to absorb sufficient moisture to bear a long journey without flagging. Up the centre of the shed a closed-in tank extends, about 2 feet 6 inches high, with movable boarded top in sections, containing about a foot of water heated by pipes. In this baskets of

the earliest forced flowers are stood before fully open, a slight syringing is given, the tank closed, and when the top is removed the blooms are expanded and ready for packing. From the centre of the roof, or rather ceiling, immediately above the tank alluded to, hangs a wide shelf on which are placed 6-inch holeless pots filled with water, and which are utilised for holding the heavy trumpet section of Narcissi, it having been found that treated thus they are exempt from injury to the trumpets which occasionally occurs when they are inserted in the wooden trellis.

On one day during the week preceding Easter this house contained 300,000 flowers, which were bunched and packed in six hours by the experienced staff, whose dexterity in handling the blooms is the result of intelligent supervision and constant practice. In the same week over 50 tons' weight of boxes of flowers was dispatched from the Isles of Scilly to the mainland.

The pickers carry with them india-rubber rings. When as large a bunch as they can conveniently handle has been gathered, a ring is slipped round the stems and the bunch is laid down. These bunches are then collected, deposited in hampers, stem downwards, and driven to the packing-shed, where the bands are removed and the flowers placed in water. Before packing they are tied in bunches of twelve, all the flowers facing one way. The boxes, which are made on the estate, are fastened down with string alone, and not more than three boxes made into one package.

The soil of Treseo seems admirably adapted to the growth of Narcissi, the foliage of the larger varieties, such as Emperor, Empress, and Sir Watkin being extremely strong and healthy. I found that some single bulbs of Emperor which I examined had produced five flower-stems. In view of the fact that the islands will soon become exporters of bulbs in quantity, as well as flowers, it might be well for English growers to consider the advisability of procuring supplies from this source instead of relying on the imported Continental-grown bulbs. At the time of my visit a bulb of Empress that had been accidentally dropped at the foot of a hedge, and which merely lay on the soil, had rooted strongly and was carrying two fine flowers, while some scales of *poeticus ornatus* that had found their way into a heap of refuse soil had developed into a fine clump.

Of the Polyanthus section, *Gloriosus* seems to be the most amenable to forcing and pays well when this system is resorted to, but, gathered from the open, is inferior in value to Grand Monarque and Soleil d'Or. *Obvallaris* is a useful variety, and being the earliest Narcissus proper and of a bright colour, brings in a good price when forced. The season commences with the Paper-white, which, however, is not in particularly great request at the Scillies, as even when unforced it comes in during December, sometimes even in November, and up to Christmas the Chrysanthemum has the call in the market. The last Narcissus to flower is *poeticus plenus*, which is marketed in May.

Emperor, Empress, Sir Watkin and Golden Spur are among the varieties that are grown in quantity, while *Barri conspicuus* is a coming flower and bids fair to become popular, but it is doubtful if it will ever become such a favourite with the flower-loving public as the white-petalled varieties of *poeticus*. In the experimental garden by the old abbey a fine collection of the rarer varieties is grown, amongst which Duchess of Westminster, Catherine Spurrell, Glory of Leyden, Madame de Graaf, Tortuosus, Cernuus, Burbidgei, Robin Hood, Duchess of Brabant, Macleayi, Santa Maria and Queen of

Spain were especially worthy of notice. In the rock garden, *Narcissus Bulbocodium sulphureus* and *N. triandrus albus* were flowering well.

I am unable to give any reliable data as to the average prices realised by the different varieties during the season, but the week after Easter I was shown at St. Mary's a memorandum that had just been received from a provincial salesman, in which the prices fetched by the last consignment were given. They ranged from 1s. to 4s. per dozen (bunches of twelve blooms), the highest value being obtained for Sulphur Phoenix. This is, of course, no criterion of the prices realised during the winter, when I was informed that the returns sometimes reach 18s. to 20s. per dozen.

S. W. F.

## NOTES ON HARDY PLANTS.

**Primula arototis.**—Of all the species and natural hybrids I know, this most nearly approaches blue. It is a reddish purple, though why we should be so anxious for the colour blue in Primroses I do not know, for in their flowering season we have masses of this colour in other genera. It should be stated, however, that this is a variable *Primula*, even more, perhaps, in the form of its foliage than the tint of its flowers. I have several specimens just now with big leaves not only irregularly toothed, but deeply lacerated and almost approaching the pinnate. I know no other *Primula* of the Auricula section so widely removed from the entire leaf form. As the plants grow older they become more characteristic.

**Arctostaphylos californica.**—This is a strong grower compared with the better known *Uva-ursi* and alpina, larger in all its parts and of a more sprawling habit. It is to be recommended as an evergreen creeper for half-shady banks or rock gardens, but its chief point is the free manner in which it flowers, and the pretty pink blossoms are arranged in compact clusters. I set my plant in an off-handed way on the north side of the rock garden in good loam and leaf-mould, placing on its long stems good-sized stones, and the result is that under the stones there is plenty of new roots, and it promises to soon cover its allotted space.

**Dianthus microlepis.**—Of all the *Dianthi* I have ever grown this is by far the earliest to bloom. It opened its first flowers on the last day of April in this late season. To have any Pink thus early must be a desirable feature, but this is not all that can be said in favour of this plant. The habit is tufted and very dwarf, not more than 3 inches high, including the bloom, which stands well out of the grass. True, the flowers are small, but they are very sweet and of an attractive rosy carmine hue.

**Calceolaria plantaginea.**—I have noticed that though this flowers more satisfactorily in low or damp positions, such positions have not always enabled one to find such healthy growths in spring as are found in warmer or drier soil, where it never fails to live and spread.

**The Wood Anemone (nemorosa).**—A blue form of this which I have been growing for six or eight years, and sent me from a Welsh wood, has been exceedingly fine this spring. The flowers are each 2½ inches across, and with more of the blue tint in them than I get in my plants of *Robinsoniana*. It was not so at first; for two years they were not to be distinguished at all from the common form, but year by year they have got larger and more blue. In the same way off-sets that have been moved have gone back to the normal form, but change with years when left alone.

**Ranunculus bilobus** is a gem of the first water. In early April the fresh reniform leaves were quickly succeeded by flowers of snowy whiteness and as large as a florin, and though the plants were but 3 inches high, the flowers were very conspicuous.

**Primula variabilis**, so far as I have ever proved, has deep ruby red flowers, otherwise it is not distinct, belonging to the Auricula. There is a tendency, I believe, in certain quarters to give special names to but the merest or slightly varied forms, and this almost seems to be such a case. Anyhow, it is certain that this plant is not the *variabilis* of Goupil, which belongs to the Cowslip section.

Woodville, Kirkstall.

J. WOOD.

## THALICTRUMS.

(MEADOW RUE.)

THE species and varieties which constitute the above genus include several which are well suited either for the border or the rock garden, while a few of the more robust would be useful



in the wild garden. But with these plants, as with many others, the most has not been made in a large number of instances. Isolated examples of some of them may, and indeed are, frequently seen in those gardens devoted to hardy plants, and very pleasing and effective they are when seen in good condition. When in flower their feathery plume-like heads form one of the most distinctive features in the garden. This is particularly true of the forms of *T. aquilegifolium*, which have probably the largest flowers. Few plants are more easily cultivated, and the majority succeed well in light loamy soil. In those gardens where heavy or very cold soils exist, the addition of some sharp

grit and decayed leaf soil will assist in keeping the soil open. The more robust-growing kinds, such as *flavum*, *lucidum*, *rugosum*, and *glauceum*, are more at home in a good loamy soil. If this be fairly rich and deep, these kinds will annually attain to from 4 feet to 6 feet high, and in large groups their feathery heads of blossoms will prove ornamental. All the kinds just named are of free growth, and may readily be increased by division of the roots just as growth commences in early spring. Any of those above named may be turned to good account by being well placed among shrubs in large groups for effect. If employed in the herbaceous border, they should be kept at the back by reason of their height. Among the dwarf kinds worthy of a place in the front row of the border or in the rock garden are

*T. ALPINUM*, a species with few flowers and four purplish sepals. The plant is rarely more than 8 inches or 10 inches high, and has a tendency to produce stoloniferous stems. Native of Britain, North America, &c.

*T. ANEMONOIDES* is a frail, elegant and dainty species not more than 4 inches high, with white blossoms nearly 1 inch across. If grown in the open ground, a sheltered shady spot in moist, peaty soil should be selected, and when in flower its delicate blossoms are worth protecting. It may, however, be well grown in large pans in a cool frame, and in this way may receive protection. There is a double-flowered form of this plant requiring the same treatment. It is worthy of note that shade and moisture appear more essential in the cultivation of these two kinds than to the majority, as they quickly scorch in full sunlight.

*T. MINUS* is another very desirable species, and includes some of the most beautiful and useful of the dwarf-growing members of this group. Some of the forms very much resemble the well-known Maiden-hair Fern, and conspicuous among these is the kind grown in our gardens as *T. adiantifolium*. This is invaluable either as a pot plant or for forming small groups in the rock garden. The foliage in a cut state is especially useful for mixing with flowers, and is worth growing on a large scale for this particular purpose. The plant is perfectly hardy, but its elegant Fern-like foliage is more quickly produced by frame culture. It succeeds well in any good sandy loam, though by no means particular as to soil or situation.

Another very charming plant, and from a decorative point of view perhaps the best, is

*T. AQUILEGIFOLIUM*, the feathered or tufted Columbine. In flower this is extremely showy and sure to attract attention, and when seen in well-established groups the corymbose panicles are very striking and the foliage handsome and distinct. There are several well-marked varieties of this: *T. a. rubrum*, with its feathery masses of crimson; *T. a. atro-purpureum*, *T. a. formosum*, *T. a. roseum*, all well worthy of cultivation. These kinds grow well in sandy loam fairly rich, and should be left alone for a few years to become well established.

Some of the varieties above named are very scarce at present, and it may be some years before they are at all plentiful, as they are somewhat slow of increase.

E. J.

**Daffodil Grandis or Grandee** is, in my estimation, the best of the bicolor varieties. It is rather later than *Empress*, and under good culture has finer blooms than either that variety or *Horsfieldi*. I fancy that this Daffodil is comparatively unknown, for I rarely see it mentioned, and until I grew it myself I was not aware that we had a white-winged variety that could compare with *Empress* or *Horsfieldi*. Can anyone say where

*Thalictrum aquilegifolium.*

and by whom Grandis was raised? Probably it is a seedling from Horsfieldi, and being considerably later in coming into bloom than that favourite kind, has attracted much less notice. In any case it is very valuable as forming a succession to these grand bicolor kinds, which are so highly prized by both the amateur and the grower for profit. This variety, Queen of Spain, abscissus and Mme. Krelage were in bloom with me at one and the same time, abscissus being rather later than the others in expanding its blooms.—J. C. B.

## THE ROCK GARDEN.

### VIII.

MAY 15.—The temperature during the past fortnight has been much warmer than usual at this time of the year. May 1 was the last of our rainy days here, and since then the sun has been shining so brilliantly, that in spite of the backward season many rock plants have opened into bloom almost before their usual time.

### THE WATER GARDEN.

The water garden is already aglow with the bright colours of Nymphaeas, which, although planted only twelve months ago, are already well established. Among the choicest of the varieties now in bloom is the lovely deep crimson Nymphaea Leydekeri rosea. Close by, Nymphaea pygmaea alba is looking quite at home. The small white flowers of this variety have a deep yellow centre and are very striking. Nymphaea Marliacea carnea is also fully expanded, and its very large flesh-coloured flowers form a delightful contrast to those of the other varieties mentioned. Another Nymphaea now blooming is Nymphaea Marliacea rosea with large delicate pink blossoms. A plant of the well-known Aponogeton distachyon is also blooming, and its fragrance is delightful. The pond in which these Water Lilies are blooming was made of concrete, and masked with grassy banks and rocks as described in my previous articles on the subject of constructing ponds in the rock garden. It is about 2 feet deep, and contains specially constructed large packets filled with rich soil about 1 foot below the surface of the water. That this situation suits the requirements of the Water Lilies is proved by their flourishing condition and the abundance of their blossoms in spite of the exceptionally severe winter.

### BOLD EFFECTS.

For bold effects the plants employed must either be themselves of considerable size, or otherwise they must be grouped in masses. I will name some of the principal larger kinds of rock plants suitable for this purpose, confining the list only to such as I have observed in bloom during this and the previous week.

*Rubus deliciosus* is in full bloom at Newton Abbot, where its long arching branches hang over a projecting rock, and, laden with large white blossoms, presents a beautiful picture. Close by is another bold effect, produced by a mass of *Centaureas* hanging down over the ledges of a large rock. Those in bloom are *Centaurea montana* (blue), *C. m. alba*, *C. m. rosea* and *C. m. sulphurea*. The last, by the way, is misnamed, as its flowers are not sulphur-yellow—as the name would imply—but creamy-white. The deep yellow *Centaurea macrocephala* does not bloom till later.

*Lithospermum purpureo-ceruleum* on a rock by itself is also most effective. In such a position its loose, pendent branches can fall gracefully over the stones without doing harm to other plants. The same might be said of the *Helianthemums* now blooming in the same rock garden. In a well-drained sunny position

where these are covering the face of a large rock they have not suffered during the severe frost, but where planted on moister flat ground they have been killed. The following are now blooming together: *Helianthemum pilosum*, *H. roseum*, *H. venustum*, *H. praecox*, and a pretty species called Rosy Gem. The pink and the white kinds seem to have suffered less than the yellow ones. *Polemonium reptans*, with its handsome blue flowers, may be used with advantage for flat portions of larger rocks, where it is most effective. It forms an effective contrast to the large leathery leaves and pink flowers of *Megasea crassifolia* and *M. atro-purpurea*, or to the yellow flowers of *Chrysogonum virginianum*, all of which are blooming simultaneously. Under this section of plants for bold effects I might also mention such quick-growing kinds as do not attain any considerable height, but spread quickly into a large carpet, covering stones and soil alike, and from the fact of their being in bloom together might form most effective combinations of colour and foliage as long as they are kept away far enough from choicer plants of slower growth. *Aubrietias* are not yet past, and the large number of quickly spreading Saxifrages with white flowers associate well with them. Of other white flowers now blooming I will mention *Pyrethrum Tschihatsehewi*, the fast spreading Russian Daisy, and *Dianthus plumarius*. Iberises, too, would now have been in bloom if they had not been cut down by the late severe frost. A large and excellent pink carpet is formed by *Saponaria ocmoides splendens* and also by *Polygonum Brunonis*, which is here just opening, and the pale pink *Chrysanthemum Zawadskyi*. For a brilliant blue carpet none can surpass *Lithospermum prostratum*, which, unfortunately, has suffered during last winter in many places. For carpets of a mauve colour the most effective of all are the dwarf *Phloxes* in their various shades, some of them almost blue in colour. Of these I will only mention *Phlox setacea* "G. F. Wilson," *P. divaricata*, *P. Lindsayana*, and the numerous *P. adboroughiensis* varieties.

Eecter.

F. W. MEYER

(To be continued.)

### CHRISTMAS ROSES.

MR. JENKINS'S article on Christmas Roses in THE GARDEN for May 4 (page 311) is full of valuable information on the cultivation of these useful flowers, and I quite agree with him that August is the best month in which to transplant or divide them. In no part of the country are Christmas Roses grown so largely or so well as in the west of England; in most cases large clumps may be found that produce hundreds of blossoms in a year. The foliage of such plants is always large and handsome, and the leaf-stem will often measure 1 inch in circumference. Such specimens are, however, well cared for in regard to top-dressings of short manure in the summer and applications of manure water in dry weather. We have one very successful grower in this district who attends the local market; his practice is to take up and divide the plants some time in August, and he will pull huge specimens to pieces at that time and place the different parts in suitably-sized pots with impunity. The plants do not suffer in any way. As soon as potted they are placed on the shady side of a high hedge and remain there until there is danger of frost, when they are removed to a cold frame. Treated in this way the plants flower as well as anyone could wish.

A good way of protecting the flowers from rain and frost, in the case of plants that are growing in the open ground, is adopted in a private garden near here. With some well-moistened clay and bricks the gardener every autumn builds a temporary 4½-inch wall along each side and the

ends of a line of plants, and high enough for the flowers to rise without touching the glass frame with which they are covered. With two or three thicknesses of mats on the glass, one can quite understand that it must be a sharp frost to reach the interior of such a structure. The walls are left to protect the foliage as long as necessary, but they are taken away in the summer to allow the air to reach the plants.

Taunton.

J. C. CLARKE.

### HARDY FLOWERS AT OAKWOOD, WISLEY.

IT would be difficult to describe the change that has taken place in Mr. Wilson's Wisley garden during the last few years, and it would be quite impossible on paper to give anything more than an idea of the floral treasures it contains. Probably Oakwood is never more interesting than in the spring of the year. It is the time of the Primrose, which, as all know, has received through a series of years so much attention from Mr. Wilson. The thousands of plants covered with flowers, displaying every tint that can be found in this flower, are alone worth a long journey to see. Among them Oakwood Blue is, of course, conspicuous, but some of the brighter tints are very striking. Few flowers vary so much from seed as the Primrose, and this great variability stands in the way of quickly increasing any of the finer forms of this flower. This can be easily seen when looking over beds of plants raised from Oakwood Blue, wherein flowers resembling those of the parent are comparatively scarce. These shades of blue varying much in intensity are, however, very beautiful and form a fine contrast to the crimson, bright red and other intermediate shades. Auriculas, so much neglected at the present time, are, I was pleased to see, getting a fair amount of attention at Oakwood. I noted that some very lively mauve tints approaching blue prevailed among them. I do not see that a really blue Auricula is out of the range of possibility. As before mentioned, the aspect of Oakwood has been changed during the last few years—so much so, indeed, as to be scarcely recognisable to anyone who has not seen it for some time. Ten years ago the greater portion was a wild garden pure and simple, but this has been changed, though in such a manner that whilst the needs of each plant are well provided for, the natural features of the place are rather heightened than destroyed. Oakwood now consists of, so to say, a series of gardens differing from each other both as regards general appearance and the character of their occupants. Therein the spade, fork and hoe are almost unknown, the cultural system apparently consisting in creating suitable conditions, placing the plants there, and allowing them to grow as they would in their native haunts, the attention given consisting merely in pulling out weeds and keeping rampant growing things within due bounds. In this way there is of course no root disturbance, and low growing things such as the dwarf *Phloxes* spread and carpet the soil. When some years ago this way of growing hardy flowers was advocated in THE GARDEN, I must confess to having been somewhat sceptical, and those who like myself have been doubters, would, on visiting Oakwood, have to admit that under certain conditions at least successful results can be worked out in this way. At the same time I should be sorry to advise anyone not having a good knowledge of hardy flowers to attempt this form of culture except on a small scale.

In a garden containing thousands of species, and many of them in bloom, it is rather difficult in a hurried visit to select any for special mention. Nothing in the place, however, gave me greater delight than a little colony of *Erythronium grandiflorum*. There is something wonderfully attractive about this flower springing from the natural leaf deposit in a moist place in the wood, and looking just as one would imagine it does in its native wilds. It is worth growing for its pretty variegated foliage alone, which in substance and coloration reminds one of *Phalenopsis Schilleriana*.



Where this grows plentifully—as I suppose it does in its native land—it must in its blooming time form a charming picture. No greater contrast to this modest denizen of the woods can be found than the brilliant *Tulipa Greigi*—too gaudy perhaps for some, but probably the most showy flower of spring, and one which is sure to attract attention. It is placed where it gets a maximum of sun heat, necessary for the due maturation of the bulbs. *Primula nivalis* and *P. viseosa* are in fine condition, and I never before realised their decorative worth. They grow and bloom as freely at Oakwood as the common *Auriculas*, and thus grown they are among the finest of spring flowers. They are placed in one of the most exposed positions in the garden, where they catch the breeze and sunshine, and they like their home. The Prophet Flower (*Arnebia echioides*) is apparently quite at home, and *Shortia galacifolia*, at the base of a tree in the wood, has, seemingly, come to stay. It is a neat-growing little thing with pure white flowers, but, I imagine, must have time to show its true form. *Epigaea repens* enjoys such robust health at Wisley, that I failed at first glance to recognise it. It is at its best in a damp place at the foot of evergreens, and I should doubt if it could be found in a higher state of vigour in its own country. The foliage is broad and glows with health, bred evidently of the congenial atmospheric conditions. *Daphne Blagayana*, so difficult to please, is in excellent condition, the foliage rich of hue and flowers numerous. It grows on a mound in full exposure. *Orobanchaceae* I must say a word for; it is a good thing, the colour of the flowers being attractive. I am not aware if any difficulties attend its culture, but I imagine that it only requires good loamy soil and fair drainage. Lenten Roses were going over, but by their vigour and abundant flower-stalks one could see how they love the partial shade and more or less humid atmosphere that prevail in some portions of the Wisley garden. And here let me give your readers the benefit of something, learned respecting this interesting family. It has frequently been remarked in *THE GARDEN* that the Lenten Roses, owing to the fact that the flowers fade so quickly, are useless for cutting. Mr. Tatnell, Mr. Wilson's gardener, overcomes this drawback in a very simple manner. Taking a flower, he made cross cuts at the base of the stem, when the segments immediately began to curl outwards. "Now," said he, "these will last as long as Christmas Roses," an assertion proved by the writer to be quite correct. I advise growers of Lenten Roses to make this experiment, and they will thus increase their affection for a very charming and interesting family of hardy flowers.

Daffodils at the time of my visit were one of the chief glories of Oakwood. They must be great favourites, for they are here, there and everywhere. One would naturally expect to see them well represented and in good condition, but I think that many like myself would be surprised at the vigour of such kinds as *Princeps* and *Empress*. To give your readers a fair idea I measured a bloom of the latter. It was  $\frac{4}{5}$  inches across the perianth. *Princeps* was correspondingly fine, with blooms almost as large as *Empress*, on stems nearly 2 feet high; indeed, I was not aware that this Daffodil could be brought to such dimensions. What I like about the *Narcissi* at Oakwood is the free way in which they are allowed to grow. One sees masses of them full of bloom. To all appearance they have been undisturbed for years, and they enjoy the repose. If flowers of such quality and in such quantity can be produced in this let-alone manner, what are we to say about the annual lifting that has been advocated in *THE GARDEN* and that is practised in some market gardens? One good gardener says, transplant annually on to fresh ground if you would have good blooms. Another tells us to divide every third year; but after seeing the masses of bloom both of the trumpet and star *Narcissi* at Wisley, one might conclude that this must be useless labour. Perhaps what may be necessary in one soil is not so in another. Emperor and Sir Watkin were in their finest form: the little *moschatus* and *cycla-*

mineus were doing very well, and some fine flowers of *W. Goldring* gave a true idea of the value of this variety.

Of the Lilies, Irises, and other things I may say that there is fair promise of a bounteous harvest of bloom, but of these I hope to have something to say at the proper time. J. CORNHILL.

## GIANT ASPHODELS.

(EREMURI.)

THESE noble hardy Asphodels are now becoming better known. They are natives of Central Asia and quite hardy in our country, but owing to their early growth, a well-drained, sunny, sheltered spot should be chosen for them. They are not plants for every garden, but many gardens have spots that would suit them. They do not like transplanting or root-disturbance, so previous to planting the soil should be thoroughly dug up. There are several species in cultivation, but one of the handsomest and the tallest is

*E. ROBUSTUS*. This kind has large tufts of long grassy leaves, which are of a dark glaucous green colour and about 4 feet in length and 2 inches or more in width. The flower-spike appears in June, and upon established plants grows 5 feet high, or even more before a bloom expands. It then continues growing and flowering for several weeks, producing hundreds of rosy blossoms and spikes quite 10 feet in height. What is evidently a form of this species is a very handsome kind named *nobilis*. It has shorter, broader leaves, a tall and noble spike of bloom, with flowers of the same colour as those of the preceding kind, but larger, broader, and of better form. It is quite distinct.

*E. BUNGEI* is one of the very best, and of this again, there are two distinct forms. The commoner produces flower-spikes about 3 feet in height, and only about 1 foot of the tip bears flowers, which appear in July. They are of a clear canary-yellow colour, with conspicuous orange stamens. The other form is identical in regard to colour and size of bloom, but the spike is taller and handsomer, as it attains 5 feet or more in height. Quite 2 feet of the upper part is crowded with splendid flowers. It is a rare variety, and there appears to be no general agreement as to its name. It is offered in the list of a good Dutch grower as *E. Bungei perfectus*. In leafage this species is much like a *Tritonia*. From the north of India comes

*E. HIMALAICUS*, which also blooms in summer, having spikes about a yard in height, bearing pure white flowers. All the kinds as yet in cultivation bloom in summer, with the exception of

*E. OLGEI*. This is an attractive kind, which only commences to flower late in August or early in September. It lasts well into the succeeding month. Its flower-spikes grow about 3 feet high, the lovely buds being of a clear peach-pink colour, and when expanded of a paler pink shade with conspicuous yellow anthers. There are other species known, but not yet much in cultivation.

A. II.

**Anemones and the frost.**—During the last few years I have raised thousands of the *St. Brigid* strain from seeds, and have at this time of year usually had a good show of bloom. In the autumn I had some thousands of roots, and I find that ninety per cent. are either killed or so injured, that they are worthless for this year at least. This is the first time I have ever known *Anemones* to be seriously injured, and were we likely to get winters similar to the past, we should have to adopt measures to guard the roots from extreme cold. It frequently happens that the foliage suffers during the winter, but this does not much matter if the roots and crowns are in good condition. On the return of mild weather new leaves are put forth and the plants soon lose

all traces of the hard weather. This spring, strong roots that are useful for supplying cut flowers, and that last spring yielded a succession of fine bloom during a period of two months, are almost flowerless. Large bulbs five and six years old have completely disappeared. No doubt a light covering of litter would have saved them, but I have always looked upon *Anemones* as so hardy, that protection of any kind would be superfluous. For the future I shall make a point of mulching with manure before the tubers break into growth, though, of course, this is not practicable with young seedlings, as they continue to make leaves all the summer and autumn.—J. C. B.

## *Tulipa Gesneriana* and other species.

—May I suggest through your columns the necessity there exists for the proper nomenclature of what are known as Tulip species? To my knowledge they are in endless confusion. I have now before me three or four self colours that certainly approach nearer to Mr. Baker's *macrospella* than to *Gesneriana*. The colours are eerie with white base, magenta with blue base, and a white self, growing to the same height as *macrospella*, all having the perfume of the latter, while *Gesneriana major* true is much taller, without any perfume, and an enormous flower. A minor form of this same *Gesneriana* comes from Holland that I would be inclined to name *macrospella major*. Then we have *Tulipa maculata* in two forms, major and minor, coming from the Dutch bulb farms, and a huge yellow flower, under the name *Jaune Pure*, that should be simply yellow *Gesneriana*. *Tulipa Billietiana* is also in confusion, coming as it does from some of the best firms as true, while from others it is simply the well-known *Golden Eagle*. The true *Billietiana* illustrates its character so distinctly in the leaf formation, that no one can be deceived; besides the bloom shows the red tinge when first opening, while *Golden Eagle* is a week or ten days in flower before its glorious blaze of scarlet and gold appears. I look upon *Golden Eagle* as a gorgeous Tulip for effect in huge masses. Then there are elongated sugar-leaf-shaped Tulips in flower now—self colours in terra-cotta with green base and orange with black base, deep crimson with jet black, and also pink striped and self yellow. In shape the buds are like those of the Parrot species, but the petals are smooth and not crimped like those of the Parrot Tulip, and all tall and May flowering. I would suggest that we should have a conference of Tulip species at Chiswick, where specimens could be sent in July by numbers from the old gardens of the United Kingdom, and let us get out of confusion. See what a conference did for the Daffodils, work now, I am sorry to see, at an end, yet a basis of operations that will hold good for years to come.—NEMO.

## ONCOCYCLUS IRISES.

I SEND you a gathering of *Oncoeyclus* and *Regelia* Irises. Among them you will recognise some old friends, such as *I. iberica*, *I. susiana*, &c., but there are others as well. The varieties of *I. Korolkowi* are especially beautiful, and some of them are quite new to me, such as *I. Korolkowi concolor* and *I. Korolkowi venosa*. If Mr. Balfour had not made it plain in his recently published book that there is no such thing in Nature as an objective standard of beauty, I should have put in a claim for them that they are in strictest accordance with it, but that is rather against my idea. As it is, I console myself with the thought which he allows to us, that they give a glimpse of something better than this world. *Iris Lorteti*, *I. Helena*, and some few others are, unfortunately, only conspicuous by their absence. This grievous calamity is entirely owing to the unexpected and desolating frost, which defied panes of glass and layers of mats, and cut to pieces the foliage which was still so promising in December; but to be forewarned is to be forearmed, and boards laid upon the frames after the fashion which prevails at Baden-Baden will prevent the recurrence of any such thing in the future and make my treasures safe.

As every year comes round I can only say of these *Oncocyclus* Irises that they seem to me to be more bewitching than ever. In their presence I can bid good-bye to *Narcissi*, *Anemones*, *Scillas*, &c., without a pang, but I should now like to hold the year back, or at any rate to moderate the pace with which my Irises are passing out of sight. Such delicate and ethereal refinement as they show cannot stand up against the fierce rays of a burning sun, and my special favourites will this season just come and go.

May 15.

H. EW BANK.

### FLOWER GARDEN NOTES.

**ANNUALS.**—So soon as annuals that have been sown either broadcast on beds to assist in the flower garden display or on prepared borders for cutting can be handled, they should be thinned out to the respective distances likely to be required to allow for the development of individual plants. It is a great mistake to let them remain crowded thickly together; the size and quality of the flowers are thereby seriously affected and the duration of bloom also considerably shortened. Where slugs are troublesome (and they seem very numerous this season, especially on beds and borders surrounded by Grass), it will be found advisable to mix up a goodly heap of fine wood ashes, adding thereto a fair proportion of soot, and dusting the beds all over with the same. Somewhat choicer annuals that were sown in frames on a slight hotbed will now be nice plants, and may be transferred to permanent quarters at any time. As East Lothian Stocks have wintered rather badly, the spring-sown batch of Stocks will be found very useful, especially those varieties of branching habit that are in request for the flower basket. *Cosmos bipinnatus* in different colours came in very acceptable last year for grouping at the back of borders, and the quantity sown in 1895 is, therefore, considerably increased. This is an annual of good habit, growing and flowering freely on rather poor soil, and having beautifully cut foliage as well as light, graceful flowers. Almost identical in height, but of a different shade of colour, is the new miniature Sunflower, an annual that makes a very effective group, holds its foliage well, and continues in flower until late in autumn. If bedding plants are rather scarce, one or two large beds may be filled with *Chrysanthemum tricolor* in variety. Very rich colours are obtainable in these *Chrysanthemums*, and, like the Sunflower, they bloom well until the end of the season. Dwarf annuals, such as *Petunias*, *Verbenas*, *Phlox Drummondii*, &c., that were sown early will, if they were pricked off into boxes or frames, now be nice plants, and they may be planted out at once, as they will bear more cold than *Geraniums*, *Fuchsias*, and the like. The remarks made above as to the depredations of slugs on outdoor-sown annuals will also be found applicable to those transferred from boxes or frames. Of all plants I think *Zinnias* are the first to suffer if the strain of these is a good one, and if they are planted near a harbour for slugs they must be carefully watched until they are well on the move, and remedial measures employed at the first sign of attack. If it is proposed to increase the stock of herbaceous plants from seed, boxes cleared of summer bedding stuff may be prepared for their reception. I recommend sowing in boxes rather than out in the open, allowing the boxes to remain in a cold frame until the seedlings are fairly well advanced. One is more certain of a good start in this way, and this is a consideration if seed is both scarce and expensive. The boxes should stand on a good bed of coal ashes to prevent the ingress of worms.

**HERBACEOUS BORDERS.**—There is every indication that there will be a very fine display in these borders. Plants grew away remarkably well all through the late summer and autumn of 1894, and there was a wonderful difference in their appearance at the end of that season and at the corresponding time in 1893, the protracted drought of the preceding summer having seri-

ously crippled many things on light, rather dry soils. It says much for the value of this race of plants that they were very little affected by the exceptional weather of last February. From the dwarfiest *Violas* and *Campanulas*, the *Pinks* and *Veronicas* on the front of borders, to the tall *Sunflowers*, *Starworts*, and other things of similar height at the back, all may be pronounced perfectly hardy. I have lost *Zauschneria californica*, a considerable number of *Montbretias*, part of a batch of *Gypsophila paniculata*, and last, though by no means least, all the large clumps of *Fuchsia Riccartoni*, *F. gracilis* and *F. globosa*, which had been many years in the same spot. I blame myself now for not mulching them heavily, but there was no apparent necessity, as they had never suffered before even in very severe winters. What is the experience of GARDEN readers with *Arundo conspicua*? I find my clumps are killed, although they were staked and tied up. The true *Pampas* (*Cyperium argenteum*) has, however, come through safely, but is considerably crippled. Referring back to those things that are so much better this year than at the same time in 1894, it will be found that it is peculiarly the case with species or varieties of the same that are at their best in a fairly moist spot, and that suffer proportionately from protracted drought. On light dry soils the annual heavy surface mulching is one of the chief essentials towards the successful culture of such plants.

**SPRING FOLIAGE.**—From the time that so many things in the way of tree and shrub life came to be recognised as important features in flower garden work, the many and varied forms of foliage have been of considerable interest. I notice that the exotic trees and shrubs that are as a rule late in showing leaf are this year even later than usual. Indigenous trees have put on their spring dress, but at the present time (May 10) the only sign of life in such things as the deciduous Cypress, the Kentucky Coffee Tree, and in shrubs the Virginian Fringe Tree and *Asimina triloba* is a plumping of the buds. One of the finest things in the way of foliage just at present is furnished by the Copper Beech, backed by large specimens of the common Beech and flanked by Larches. I saw this bit of tree life the other evening with the rays of the setting sun shining full upon it, and the glowing tints were simply indescribable. *Prunus Pissardi* and *Cornus brachyoda* are as effective when contrasted with green shrubs of similar height as is the Copper Beech with trees of larger growth. It may be well to give the reminder in connection with flower garden work that there are many hardy trees possessing foliage of such unique character as to admit of their use in sub-tropical gardening where large Palms and *Bracenas* are not available. Young plants of the Umbrella Magnolia, of *Ailanthus glandulosa*, of *Pyrus Sorbus*, and nice sized plants of *Azara microphylla* may be mentioned as suitable subjects, whilst, given suitable soil and situation, there are no better things than the tallest and most graceful members of the Bamboo family.

E. BURELL.

**A note from Langport.**—My garden is looking better than ever at this season of *Paeonies*. Despite the severest winter I ever knew, the Tree *Paeonies* and the early herbaceous sorts are just now in perfection, as also are *Magnolia Lenoé*, scarlet Chestnuts, *Gentianellas*, Siebold's double-blossomed Cherry, *Cydonia Simoni*, and the various Lilies. *Rhodotypos kerrioides* is now covered with flowers like Orange blossom. *Rubus deliciosus*, *Aquilegia cerulea* from the Rocky Mountains with flowers 3 inches across, Grape Hyacinths and yellow Banksian Roses are all in bloom. *Akebia quinata*, with racemes of flowers, and growing against a white lias wall, is very attractive. Alpine *Phloxes* (white and pink), *Iris paradoxa*, *floribunda*, *olbiensis alba*, *Fontarabia* and Mrs. Gretton, the yellow *Asphodel*, the white, red and blue *Centauras*, Iceland Poppies, *Leichtlin's Aubrietia*, *Myosotis alpestris*, *Globularia trichosantha*, tufted *Pansies*, Fairy Apples, *Wistaria*,

the large heart-leaved *Saxifrage*, with spikes of rosy purple, and an alpine variety covered with crimson flowers, the crimson and yellow-flowered *Genista Andreana*, *Lily of the Valley*, *Berberis stenophylla*, the common *Barberry* and single-flowered *Pyrethrums* are also flowering freely; all growing in common soil about 1 foot deep on a bed of gravel. In dry weather in summer the soil bakes as hard as a stone, and when wet it sticks to one's boots like bird-lime. The broad-leaved *Aponogeton* covers the water in the pond with its flowers. All have been in the open during the winter without protection. The Japanese Wineberry is quite hardy and is growing fast. The Scotch Thistle is growing apace; it already has leaves 2 feet in length covered with a white down. Hollyhocks amongst the shrubs are growing fast; those in the fields were all killed. I have known the *Laurustinus* and *Laurcls* killed to the ground, but although their leaves were browned, the wood was not injured. Some of the *Pines* and *Junipers*, *Cupressus macrocarpa*, *Bays*, *Arbutus*, *Berberis japonica* and *B. stenophylla* are browned and *Roses* are killed to the ground. *Iris reticulata*, *Crocuses* and *Snowdrops* bloomed as freely as ever as soon as the hard frost was over, and the *Tulips* and *Hyacinths* followed. The *Gaillardias* are all coming up strongly, which proves them perfectly hardy. We registered zero Fahr., which is 4 below any record in this parish. My Peaches, Apricots and Pears are well set with fruit, and the blossom in the Apple orchards throughout this county is the grandest sight I ever remember.—WM. KELWAY.

## GARDEN FLORA.

### PLATE 1015.

#### SINGLE CHRYSANTHEMUMS.

(WITH A COLOURED PLATE OF (1) MISS ROSE AND (2) MARY ANDERSON.\*)

TWELVE or thirteen years ago Messrs. Henry Cannell and Sons, of Swanley, announced the distribution of some new *Chrysanthemums*, which were at the time regarded as a new departure by the growers of that popular flower. These were some single-flowered varieties, and hopes were entertained to a very large extent that they would occupy an important place at our shows. On various occasions, however, encouragement has been offered to the growers of single *Chrysanthemums*, but the exhibitor's eye has been so trained and the visitors to shows are so accustomed to see the large massive blooms of the other sections, that it is well-nigh hopeless for the most ardent lover of the single type to expect them to occupy any satisfactory position at all on the tables at our November exhibitions.

But for other purposes the single *Chrysanthemum* is pre-eminently adapted. Where free-flowering, bushy plants with abundance of colour are required late in the year, or where cut flowers in profusion are required for vases, epergnes, bouquets, &c., either separately or in conjunction with others, the single *Chrysanthemums* will come in most acceptably. In form they are varied; the colours are mostly attractive, and the light, stary flowers are capable of being set up in artistic combinations by those who desire to make use of such material. As a matter of fact, many of these single flowers are more pleasing to the eye thus used than poorly grown, undeveloped blooms of some of the large exhibition types.

In former issues THE GARDEN has given several different forms. America, a long-

\* Drawn for THE GARDEN in the Royal Gardens, Kew, Nov. 12, 1894, by H. G. Moon. Lithographed and printed by Guillaume Severcyus.





petalled Japanese single, Jane, both white and yellow, and Lady Brooke, a small yellow variety, have been the subjects of coloured illustrations in THE GARDEN. One of the most attractive groups of single Chrysanthemums figured in the horticultural press appeared in the *Revue Horticole* five years ago, but, unfortunately, without the names of the varieties being given. They were pretty, bright-coloured Marguerite-like flowers, that do not appear to have found their way into this country.

The cultivation of single Chrysanthemums presents little or no difficulty, and to ensure the most satisfactory results, the natural in contradistinction to the ordinary method for show should be practised. Either in the open border or in pots they are effective and of much use during their season.

Mary Anderson and Miss Rose, which have been selected for illustration, are two very well-known varieties, and much appreciated by those interested in singles. They were amongst the earliest introductions we had, and, I believe, both raised by Mr. C. L. Teesdale early in the last decade. They were sent out by Messrs. Cannell and Sons in the spring of 1885.

C. H. P.

## THE WEEK'S WORK.

### FRUIT HOUSES.

**EARLY PEACH HOUSE.**—The fruit from the earliest kinds, such as Alexander, Amsden June, and other Peaches, being mostly gathered, it may not be out of place to give a few details as to the ripening of the new wood. Such varieties as fail to set freely and drop their buds badly are the kinds which are specially referred to, as I find they require different treatment to our home-raised varieties. Last season we had scarcely any buds drop; even the variety Alexander behaved well. This I attributed to the roasting the trees received in 1893, the summer being so hot. After the fruit is gathered it is well to cut away useless wood. This will give the new wood laid in for next year's fruit more room and encourage thorough ripening. If the early kinds are in a separate house there is less trouble, as the trees can be treated as required, but if the house has been kept cool and rather dry to obtain fruit of good flavour, such treatment should not continue longer than necessary. In many gardens early and late trees are in one house, but the trees just over should now be encouraged to continue free healthy growth by syringing daily, closing early and maintaining a moist atmosphere. The trees with fruit just ripening will require to be kept dry overhead with more air, but those now over require moisture in abundance and the growths kept clear of red spider. The young wood should now receive more attention in the way of tying in to get it well matured, and the borders should also get water and food in the way of liquid manure, with a mulch to retain moisture; this latter will go a long way to keep down spider, and on poor or light soils the mulch damped over at night will cause new surface roots.

**SUCCESSIONAL HOUSES** will now be making good progress, and fruit in those started early in the year will be over the stoning period and taking on the last swelling. The fruits should be freely exposed to all the sunshine and light that can reach them, so that they may colour freely and get flavour. Many fruits are so much covered by leaves that it will be necessary to remove a portion, and shoots may be regulated or tied back for a time to give the fruit more light. Fruits on the under side of the trellis may be lifted by ties or small sticks and given more light. Now is a suitable time to apply food to these trees either in a liquid state or otherwise. Do the work thoroughly, as when the fruits are a little more advanced there is no opportunity of giving

food, and water also must be given sparingly. Shoots for extension of main branches should be loosely tied in position, kept clean, and free of the glass, which soon cripples growth. Avoid hard tying in of next season's bearing wood till a later date, as advised above. Placing nets to catch the fruit in houses just finishing is, I consider, useless, as a Peach in a soft, fully ripened state when it falls is much bruised. It is much better to go over the trees early in the day, and anyone with a knowledge of ripe fruit can see at a glance what fruits will part readily from the tree. The temperature for this house may now be 65° at night and 10° higher by day, with ample supplies of moisture in all parts of the house till the fruits soften, then more air with less moisture and only a little warmth in the pipes to maintain an even temperature are necessary.

**LATE HOUSES.**—Thinning the fruits and removing useless wood will be the necessary work, and as these trees receive more natural treatment, it is well to thin freely, selecting the larger number on the upper portion of the trellis, as these get more colour and attain to greater size. In thinning, it is well to study the growth of each variety, as some of our old favourites drop their fruits more during the latter part of their growth. The shoots will now require a final going over, thinning them where much crowded. The shoots from joints where fruit is left to mature should be stopped at the fourth joint; this is better than total removal, as it then assists in swelling up the fruit and does not arrest the flow of sap. With the thermometer outside standing at 65° at night, to advise on a fixed temperature would be out of the question, but sudden fluctuations must be guarded against. With rain or cold winds mildew will soon make its appearance, and a genial, growing atmosphere should be maintained.

**ORCHARD HOUSE.**—With summer weather work in this house will increase in the way of supplying adequate moisture, and my remarks a few weeks back with regard to mulching now apply with more force, as with insufficient water the fruits will cease to swell, and when ripe will be acid and the colour poor. Such fruits as Peaches and Nectarines in pots require much the same treatment as advised above, but more attention in stopping and thinning, as over-cropping will end in total loss. Other trees in pots, such as Cherries, Plums or Pears, need even more care. Cherries will now be so far advanced as to need different treatment to other fruits, and may be removed to a cooler house or sheltered corner. Later fruits just showing colour will need more moisture, and should now be thinned freely to get large-sized examples of the best quality. Trees in small pots may with advantage be allowed to root out freely, but such trees cannot be moved from place to place, so that it is well to depend mostly upon surface dressings, liquid manure and other quick-acting foods. Young trees will require more freedom, but it is well to stop early and often. Much the same culture is necessary for pot trees as advised for late Peaches, but more pinching of strong shoots is necessary, and in stopping, the reverse is required in pot culture, as the shoot at the base of the fruit must be allowed free growth, this being the fruiting wood as regards Peaches and Nectarines for next year. The syringe must be used freely twice a day, thoroughly moistening the trees in all parts of the house. The growth is much stronger if a little air is left on the ventilators at night, opening after sunset, but closing and damping as usual in the afternoon. Strawberries in pots in mixed houses are troublesome at this season. It is well to get rid of them at the earliest moment possible, or spider will play sad havoc with the fruit trees, though by a free use of the syringe the pest can be kept down, cold frames being best for the Strawberries. Green fly will perhaps be troublesome; this must be got rid of as soon as detected, fumigating several evenings in succession and syringing freely next morning.

**STRAWBERRIES.**—The season for forced fruit is now drawing to a close and there should be no delay, when any plants have been cleared of their

fruit, in thoroughly washing down all shelves and dressing walls with fresh lime, using a portion of sulphur in the limewash, as, no matter how much care was taken in keeping the plants clean, with hot weather red spider will soon spread rapidly. There is often a want of fruit at the end of May and early in June, and for that period I have advised cool frames. The plants stood on a hard coal ash bottom finish better and can be kept much cleaner. Such varieties as Sir J. Paxton and Sir C. Napier are the best for late work; the latter is less subject to red spider, and both are almost mildew-proof if not over-watered. Plants plunged in manure beds will require less moisture, but maintain a free circulation and warmth in the pipes, as such plants with sudden changes of weather are soon affected by mildew. The planting of forced plants for autumn supplies should not be longer delayed, planting firmly in good soil, deeply dug and liberally manured, not allowing the plants to suffer from want of moisture, it being a good plan to damp overhead in the evening and to remove the flower-spikes as they appear till required for a crop.

G. WYTHES.

### THE KITCHEN GARDEN.

**PLANTING VEGETABLE MARROWS.**—In many places the earliest Potato frames will have been cleared of the crop, and thus an opportunity afforded of getting the earliest Marrows transplanted. The Potato soil will afford a good rooting medium without any addition of manure at present, a little stimulant being easily given later on when the plants are in full yield. If the soil is at all dry, give a thorough soaking the day before, the plants themselves also being all the better for the same treatment. In planting do not sink the collars too deeply in the soil, or basal rot is liable to ensue, and in order to avoid the necessity of too frequent waterings at first, mulch for a foot or so round the stems with spent Mushroom manure. All blooms on the plants should be removed, one plant to a light being ample. Syringe overhead on fine afternoons until established, airing cautiously at first and liberally when growth has freely commenced. Those that are to be planted in second early Potato frames must not be allowed to suffer from want of pot room or nourishment, a little sprinkling of guano or fish manure doing much towards keeping the plants in a growing condition if in small pots and not wanted for another week or so.

**GLOBE ARTICHOKE.**—It may now be seen in what condition the stools of these are, as growth is somewhat advanced. Sometimes when much weakened by frost a colony of tiny offsets appears round the plants. It is not advisable to allow all of these to remain even if not wanted for filling up blanks or for potting. The weakest and most distant of them should be removed, and about half-a-dozen of the strongest and nearest home allowed to remain. There will be greater need than usual this summer for feeding Globe Artichokes. This may be done either by pouring farmyard liquid over a good thick mulching of cow manure, or by frequent applications of fish manure or guano sown around the plants during showery weather. Hoeing and stirring the soil around and between the plants are also highly beneficial. In March I advised those who had lost most of their old stools to take up a portion of the young offsets and pot them, afterwards giving them frame protection with the ultimate view of transplanting them. These should now be of good size, and may be put out towards the end of the month. Prepare the ground liberally, plant carefully, and mulch heavily for some distance round the base, as it is astonishing how these subjects root out when once they get established and what an immense amount of feeding they will take. When plants raised from seed are fit for transplanting, an odd piece of ground should be selected, as so many being of a worthless character it would be folly to plant them where they are to remain. On an odd plot the seedlings can be planted thickly and the good ones only retained.

**SEAKALE.**—The sets inserted some time ago for the main forcing batch now being somewhat advanced in top growth should be gone through, and the new crowns reduced to about a couple on each set. Some leave more, and, indeed, others never thin at all, but the practice is ruinous, as no sun or air can gain admission, and weak, puny produce utterly unfit for forcing is the result. After reducing the crowns give a broadcast sowing of a good fertiliser and use the Dutch hoe freely to keep down weeds. It is a good plan on light soils to give a good mulch of some light material to conserve the moisture. Nothing surpasses that oft-recommended material, old Mushroom manure. All coverings, even from the latest assisted roots, must now be removed, and any that are to remain another season must have their growths also reduced in number. The ground amongst those that were covered with pots and leaves must be pricked over with a fork, and either short rich manure worked in or a good surface mulch given later on.

**NEWLY-PLANTED RHUBARB.**—Where new plantations of Rhubarb were formed this season, and early kinds were given a sunny position and warm soil in order to encourage early growth and ripening of the crowns for forcing, a good thick mulch must be given and water supplied to the roots, as many new fibres will now be at work. Upon no account pull any from these this season, as this would greatly weaken the crowns before they get established. If any seed-stems appear, remove them at once, as these also weaken the roots. The same remark applies to old-established beds, as seed-stems are extra troublesome this season. Where any choice kind that was forced has been gradually hardening off under some protecting material, it may now be finally planted in the permanent bed and allowed a three years' growth before again being forced.

**LIQUID MANURE.**—There will now be plenty of subjects in full growth that this stimulant will suit better than all others, such, for instance, as successional batches of Cabbage, hand-light and other Cauliflowers, and Tripoli Onions. In applying it be sure to dilute it sufficiently if from a tank or well, and take care not to water the plants overhead. After applying the manure water, go over the beds with pure water, using a rose to cleanse the foliage from any that may have lodged upon it, and to wash any remaining sediment well into the ground. A good watering with this once every fortnight will do a deal of good to any of the foregoing crops.

J. CRAWFORD.

## CHRYSANTHEMUMS.

### DEPTH IN CHRYSANTHEMUM BLOOMS.

MR. MOLYNEUX has apparently overlooked the origin of this discussion. In writing under the heading of "Chrysanthemums for the New Year" I happened to express a dislike to "mere lumpiness" in a Chrysanthemum bloom, simply expressing in this a personal opinion without any idea of criticising the opinions of other people. This opinion Mr. Douglas was good enough to notice and to criticise, being careful at the same time to leave us in doubt as to his own taste, and contenting himself with telling us that "the best judges" give good points for depth. With much that Mr. Molyneux advances I cordially agree, especially as to the merits of the three varieties he names, the last of which (Duchess of York) I have not, however, grown or seen except in an illustration. These or any other drooping petalled varieties are not, in spite of their size, what I call lumpy. I feel grateful to Mr. Molyneux for giving us the points which judges keep in view when judging. Most of these points, taken individually, are admirable. Taken as a whole, however, I contend that they are leading to the production and to the retention of new varieties far less beautiful than many that are fast being supplanted from want of one or other

of these fixed points. One does not need to be told that added depth, breadth of petal, and solidity of bloom mean higher cultivation, but the question I have in view is, do these things mean added beauty in the majority of cases? If not, why seek after them?

Taking these points singly, first we have

**SIZE.**—Surely there should be a limit even to this. Is Mrs. C. Harman-Payne a type of beauty? And yet we are told by Mr. Shoemith that "it is among the first dozen seen most often in exhibition stands." Mr. Shoemith goes on to say, "Apart from its size, however, there is nothing to recommend it unless it be that it is one of the easiest to grow." Duke of York, too, is said in the same article to be a very popular exhibition variety, "dull and uncertain in colour, with very little character in its formation; it has gigantic size." It "may be made to produce blooms, perhaps not altogether repulsive, by late bud-selection." Strong words these, and I would commend the whole article, which may be found in your issue for February 16, to those interested in the subject.

**DEPTH.**—This being the original point of discussion, I may be allowed to say that I incline to the opinion that the depth of a Japanese Chrysanthemum should not much exceed one half its diameter, measuring from the base of the bracts, and always excepting those varieties whose petals droop naturally, as these cannot possibly be included as lumpy. Anything exceeding this appears to me to spoil the symmetry of the flower.

**SOLIDITY.**—This may be overdone. Some of our most charming varieties are far from solid.

**BREADTH OF FLORET.**—Not necessarily a gain of beauty. If broad, strap-shaped petals are desirable, Mr. Molyneux is unfortunate in having selected three comparatively narrow-petalled varieties, one of them especially so, as types of elegance. The tendency is to get varieties with the breadth of petal of a Cactus Dahlia plus the solidity of a show Dahlia.

**SYMMETRY.**—An indefinite point which must be a matter for individual taste.

**FRESHNESS—COLOUR.**—These may pass without comment.

**COARSENESS OF FLORET.**—I never before saw this advanced as a point of merit. Probably the converse is intended, though one has one's doubts about it when one remembers the coarse-petalled varieties so often seen.

**CONTOUR.**—Might fairly be included with symmetry.

**WELL-FILLED CENTRES.**—There is no necessity for over-filling them at the risk of spoiling the grace of form.

**CONSISTENCY OF FORM WITH THE VARIETY.**—This, I take it, should be the essence of the whole matter. If this point had its due weight, exhibitors would not need to hesitate about including old varieties which have been retained and valued at home, but which would have no weight on the show board under the existing régime.

**DIFFICULTY OF CULTIVATION.**—With this I entirely disagree. It is simply a bolstering up of varieties which, unless they have some exceptional and peculiar merit, should give way for others without this defect. Often enough the inability to grow certain varieties of delicate constitution up to their best form arises from circumstances beyond the control of the grower. Apart from the quality of the flowers when compared with other varieties, the demerits of a plant should never add weight in favour of its flowers when being judged. It is putting a premium on a bad constitution. They may be, to the initiated, wonderful examples of skill and of difficulties surmounted, but to the general public, from whom horticultural shows get their support, they have no enhanced value.

I am not sure that it would be so difficult as Mr. Molyneux imagines to add a point or two to those given by him, though one must needs have some amount of courage to do so. My first point would be in a negative direction, as it would tend to lower the number of points given in judging to flowers of inelegant form, and that

there are many such which now add greatly to the chances of winning prizes is beyond question. With the great wealth in variety that we now have, it reflects but little credit on those responsible that flowers with such little intrinsic beauty are to be found. While such things happen it is difficult to see where symmetry and contour come in. Would it not also be helpful to add "diversity of form" to the points given by Mr. Molyneux, of course eliminating all coarse and characterless varieties? I have, however, no wish nor vocation to make suggestions, and had no thought of doing so.

It is interesting and instructive to hear Mr. Molyneux's opinion of catalogue descriptions, and his wide experience must carry weight. I am glad to learn that the case is not so bad as it seems. The loss of character in some flowers of which I wrote and which had been unduly overgrown appears to me to be sufficiently consistent. Deep varieties they were naturally, and they had been made deeper and coarser by over-stimulation. If depth cannot be added by such means, what becomes of the Molyneux system of cultivation?

J. C. TALLACK.

## KITCHEN GARDEN.

### THE ASPARAGUS KNIFE.

AT page 325 of your issue of the 11th inst., in the able cultural directions then given as to Asparagus, the following passage occurs: "In forward localities cutting will now have become general. Some judgment is needed in this work, as if the knife is thrust too deeply down, &c." I have often wondered why a knife came to be used in gathering Asparagus. In my opinion one can gather Asparagus more quickly and better without a knife. By taking the young shoot gently between the forefinger and thumb of the right hand close to the surface of the bed, the shoot is easily severed and placed in the left hand, and one does the work very quickly. Here a young lad has gathered from 400 to 500 heads daily during the last week, and in no case has it taken over one hour to gather, wash, and tie up into bundles of fifty heads each. I have to produce an abundant supply of Asparagus daily while the season lasts, and after having tried various manures, I consider nothing so good as nitrate of soda and sulphate of ammonia mixed with wood ashes, all well mixed and passed through a half-inch sieve. A dressing in the first week of March and a second about the end of the first week in May keeps the beds going well into June, when cutting is discontinued. A mistake often made even now is putting a heavy covering of farm-yard manure over the beds in autumn, and in instances that have come under my notice 3 inches or more of soil above the coating of manure. Our beds here are all on a level. The spaces between the beds are as high as the beds, which I think very desirable, as the roots derive a great amount of nourishment from these spaces. When these are dug out to a depth of some inches (I have seen the centre of a bed 1 foot higher than the bottom of the alley) the principal feeders are cut off, the sides of the beds presenting an open surface for frost. It might justly be said that in many a garden root-pruning of Asparagus is done annually. I once took charge of some beds treated on the raised system, with alleys dug out and thrown on to the beds in autumn where Asparagus was never looked for until May. After reducing these beds and filling up the alleys, I cut Asparagus of the finest quality three weeks earlier the first season following; the beds produced a much greater quantity, and the quality ever so much better. Our beds

here are mulched in autumn before frost with long manure from the stables, not more than 2 inches or 3 inches in thickness, with no soil whatever over the mulching, and after all the severe frost we have had during the past winter the beds are producing quite as well this season as they have done during the last seven years.

I should have stated that early in March the mulching is taken off the beds. The bed is slightly pricked up with a garden fork, top-dressed with the manure already referred to, a sprinkling of soil being put on over all, the space between the beds forked over and as much of the mulching buried as can be got in, any that is long and strawy being put between the rows of Strawberries, so that none is wheeled away. I sprinkle the beds two or three times during the season with agricultural salt, more for retaining moisture and destroying slugs than for any manurial properties the salt contains.

A short time ago I was in a garden where the owner said to me, "Can you tell me how I do not manage to grow Asparagus?" The beds had been heavily covered with cow manure in autumn, and a thick coating of soil put over all. The alleys between these beds were like open drains, over a foot deep. On removing at least 9 inches of covering I found the Asparagus starting. Had these beds been treated as recommended, I have every reason to believe the owner would have had a daily supply of Asparagus from them since the middle of April, being a fine situation and the soil of a light gravelly nature. I started gathering Asparagus this season on April 20.

Stoke Park Gardens, Slough. D. KEMP.

\* \* \* With the above communication some remarkably fine heads of Asparagus were sent, showing that the treatment is in every way satisfactory.—Ed.

**Celeriac.**—This is a most useful vegetable and worthy of more extensive cultivation. If two batches are grown, the one for autumn and the other for winter use, the former may be used for flavouring, while the second batch, although similarly useful, will also serve as a vegetable for the dining-room. Some growers plant it out on the level by the margins of walks, but it deserves a better position than this in a good rich soil. I prefer a wide shallow trench and to dig in plenty of rich manure. Four rows may be planted in each trench, as earthing-up is not necessary, it being the root portion that is used. While growing, several copious drenchings of liquid manure should be given, in addition to which a mulch of Mushroom manure will help to retain the moisture. Anyone anxious to try it may still sow seed in a box or pan, growing the plants in a frame until they are fit for transplanting.—J.

**Late Peas.**—In northern localities, as a rule, the end of the month or during the first week in June is late enough for the final sowings of tall-growing late varieties, although up to the third week, or even the end of June, the small round-seeded sorts may be put in. Mildew is often such a scourge amongst late Peas, that one had better be a little earlier with them than incur the risk of total destruction. These remarks of course apply more strictly to rainy, low-lying localities. Further south, Ne Plus Ultra, British Queen, and Walker's Perpetual Bearer may safely be sown up to the second week in June, although even then freedom from mildew cannot be guaranteed. As these late crops are subject to much sun and wind, more care will be necessary in preparing for sowing and in after-treatment likewise. On shallow soils and at high elevations trenches are imperative. These should be taken out rather shallower than for Celery and plenty of good manure dug in. The seed should then be sown and sufficient soil returned to cover it nicely.

This will leave room for water and to apply a mulch should such be necessary. Those who with a good climate and soil can wait till the second week in June before sowing the latest crops will find Stourbridge Marrow and the well-known Criterion good varieties. Where tall sticks are difficult to obtain, Veitch's Autocrat and Sturdy are most convenient and profitable. Where the soil is hot and shallow, these trenches may with advantage be soaked with farmyard liquid once in ten days, as it is astonishing what a quantity of moisture the roots will assimilate when growth is healthy and strong.—J. C.

**Frame Cucumbers.**—Plants transferred to frames and pits in April will now be making free growth. Care will, however, be necessary for some little time in airing, covering at night with double mats and watering with warm water soon after noon on sunny days. When sun is absent, refrain from wetting the foliage, especially in the afternoon, and if any roots appear on the surface of the soil, add a little more sweet turfy compost and make it firm. Allow a sufficient number of main shoots to extend for the present, removing any that are weak or crowded. It is important that a little air be admitted before the temperature of the frames has risen too much from sun-heat. When this occurs and a volume of air is admitted suddenly, disastrous results often follow.—C. N.

**Bolting in Cabbages.**—Bolting amongst spring Cabbages appears to be very common this season. This is no doubt due to the unusually severe frost which followed the very mild open weather. Cabbages and other green vegetables grew with great freedom up to the new year, and when in a sappy condition were caught by the frost. The snow protected the autumn-planted batches of Cabbages, but the check given was considerable—so great, indeed, that bolting is the consequence. I think winters like the past prove more and more the necessity of planting several varieties of Cabbages in autumn instead of depending on one variety only. I must speak again in praise of that good old Cabbage, Ellam's, as although many plants of Earliest of All and Enfield Market, grown under exactly the same conditions and planted at the same time, have bolted with me, not one of Ellam's has done so. A considerable quantity of Early Rainham in one garden in this neighbourhood is quite free from bolting.—J. C., Newark.

**Seeds not germinating.**—There will be much disappointment this season in many kitchen and market gardens, as so much seed was sown before the ground was in a fit condition to receive it. After the snow and frost disappeared many were naturally anxious to get their earliest crops sown, but in many instances they would have been forwarder in the end by waiting a fortnight longer. In the case of Marrow Peas, many rotted where undue haste in sowing was indulged in. Sprouted Potatoes, again, that were planted before the soil had time to get warmed have come up very irregularly and weakly. By waiting until the sun's rays have had time to penetrate and warm the soil, and by repeated surface stirrings in the meantime, growth is not only quicker, but the yield much more profitable. Another point well worth the attention of all who desire early vegetables is working into the soil plenty of light opening material, such as leaf mould and potting shed refuse, at the same time raising the ground somewhat above the surrounding level. This course will work wonders in gardens which are not naturally warm and well drained.—C. H. N.

**The Potato crop.**—On early sheltered borders such Potatoes as Sharpe's Victor, Ringleader and Puritan will need attention in the matter of cleaning and earthing up. Choose a bright and if possible windy day to pass the Dutch hoe between the rows, and afterwards draw a moderate quantity only of soil up to the base of the haulm. On poor shallow soils apply a little artificial manure before earthing up, bearing in mind that we are not yet out of danger from frost, and that protection is necessary for some time longer. In

the case of my earliest batches, which I protect with troughs, I place a couple of bricks at each end of the rows. This raises the troughs and prevents them from injuring the haulm after earthing up. Of course where a framework and rough canvas are used there is little or no difficulty in the matter. Although full early under ordinary circumstances for watering Potato crops, a soaking may be found necessary on shallow warm soils, and the best time to apply it will be just as the tubers are forming and again when half grown.—C.

**Potato Ringleader.**—I am glad to hear "J. C." has found the above Potato so satisfactory. With me it is superior to Sharpe's Victor, which for two seasons I tried both in frames and in the open, and it was poor in the extreme. The soil here is heavy and retentive of moisture; therefore I think Victor requires a light soil. The best examples I have seen of it came from soil of that character.—E. MOLYNEUX.

**Mulching early Peas.**—As a rule the first early Peas are planted in the warmest corner of the garden and in a warm soil, the object being to secure a few pickings as quickly as possible. This being so, it sometimes becomes necessary to mulch and even to water to avoid a sudden collapse of the crop. Chelsea Gem is now in full flower and promises well. Before putting on the mulch of short manure, give a sprinkling of artificial manure; this will be washed down to the roots by occasional waterings and enable the pods to swell off. If this assistance is denied the crop in dry windy weather, the secondary blooms sometimes fail to set at all. If William the First, Exonian, or any of the second earlies show a tendency to grow instead of to flower, they may be urged into fertility by pinching out the leading growths, and when well furnished with bloom may be assisted in the same way as advised for the earlier crops.—J. C.

**Late Broad Beans.** Where these are esteemed after July, extra trouble is necessary to ensure a crop, as if not favoured with a somewhat shady situation, a cool and somewhat heavy soil, and plenty of nourishment, the foliage not only falls a victim to black aphid and becomes at once sickly, but the Beans are tough and uneatable. An east or, if obtainable, a north border is best, or, failing these, a plot of ground somewhat shaded by trees will answer fairly well, and even here, if time can be spared, the crops will be greatly benefited when in full growth by applications of liquid from the cow yard. For present sowing none, I think, can surpass Bunyard's Longpod, and where colour is a desideratum Green Windor will answer the purpose well. Beck's Green Gem is a capital Bean for shallow soils if sown at this date, it being dwarf, a capital bearer, and the beans of good colour and tender.—J.

**Tomato Ladybird.**—For free cropping few varieties can equal the above. I have now grown it for two seasons and find it all that was stated when sent out. It is interesting to read such notes as those of "J. C." His being quite a different locality to where this Tomato was raised, shows it is reliable in other places. It is strange that a variety highly recommended for winter fruiting should be one of our best outdoor kinds. This is readily understood, as a variety which sets so freely in winter often does well under adverse circumstances in the open. "J. C." does not advise this variety for open-air culture, but I can recommend it with every confidence. As regards quality, it was the best with me in 1894.—W.

**Sowing Runner Beans: a new method.**—This being the season for sowing runner Beans, I should like to suggest a method of growing them instead of the usual conventional rows. This is to sow the Beans in circles of 4 feet in diameter. I have practised the plan for some years, and find it more economical and convenient than the usual system of growing in rows. Stretch a line across the piece of ground to be sown and mark out centres 6 feet apart, and from these centres with a piece of string draw out circles 4 feet in dia-

meter, and you have the position for the seed Beans with a space of 2 feet between the circles. A circular drill may be drawn or the Beans dibbled in. For training, use rods about 10 feet in length, and with a stout piece of tarred string draw all together about two-thirds of their height by twisting the string round each rod and drawing lightly together cone shape. I should have said that before placing the rods in position a barrowload or more of half-rotten manure should be spread over the surface within the circle, which will be found of great assistance to the Beans when podding heavily, and later they should be similarly well mulched outside each of the circles. By this method of culture more Beans can be produced from a given space than in ordinary rows. I calculate one row of circles will produce the amount of three ordinary grown rows on half the space required for the latter.—C. H. D.

**Early Racehorse Potato.**—"J. C.'s" note on the Kingleader Potato suggests the inquiry if he or any of your readers knows the old Racehorse. I picked up a fine sample of it the other day, and the old labourer who had grown it for years assured me that under a common glass light he had often planted the Racehorse and eaten it in two months, and easily in ten weeks in front of a south or west wall, barring accidents from frosts. Some growers also know the Victor as the Six Weeks Potato, though I confess I have not been able to have young edible Potatoes in quantity so early from that very precocious variety; not even from greened sets boldly started before planting either under glass or in front of a south wall. I fancy, too, the yellow-fleshed Victor is the better kind. The Victor's reputation for earliness and quality is well established, but still one hears complaints of almost all favourite Potatoes being capricious as to soil and other local environments.—D. T. F.

## ORCHARD AND FRUIT GARDEN.

### RASPBERRIES.

RASPBERRIES will thrive and bear fruit in almost any kind of soil that is well manured; but the finest fruit is produced by plants growing in a deep, rich loam. Raspberries produce a thick mass of fibres near the surface, and therefore are very susceptible to drought, which causes the fruit to come small and shrivelled. Before a new plantation is made, the ground should be trenched two good spits deep, or, what is better, 2½ feet. This must, however, in some measure depend on the character of the sub-soil, as if it be of an inferior quality it will not be advisable to bring much of it to the surface. When trenching, plenty of manure or garden refuse should be worked into the ground. The best time for planting is as soon as the canes have shed their leaves. The mode of planting must, in some measure, be regulated by the form in which the canes are intended to be trained. Where stakes are available, the simplest plan is to tie the bearing canes to them, taking care that they are securely fixed in the soil. The stakes should stand out of the soil about 4½ feet, and to each of them should be tied, when the plants have become established, five or six of the strongest and best placed canes from each stool after the fruiting canes of the previous season have been removed. Assuming that this plan of training is adopted, they should be planted in lines not less than 5 feet apart, and the distance asunder in the line should be the same, or not less than 4 feet. They will not throw up very strong growths the first year, but if the fruit be sacrificed and the canes cut to within 1 foot of the ground, they will throw up much stronger canes the following season. Another mode of training is called the hedge system.

It consists in placing strong posts at each end of the row, connecting these with galvanised wires, strained through intervening iron standards. Thus a trellis is formed on which the canes are trained, and, if properly fixed, a plantation of Raspberries thus treated will last for years. Where this system is adopted the canes should be planted about 1 foot apart, and the shoots should be trained a little diagonally. Some growers dispense wholly with supports; they merely place the canes in bundles and unite the tops from each pair of stools, thus forming a series of arches on which the fruit is borne. This is, however, a plan which cannot be recommended. After planting, surface-dress with decayed manure. During the summer the ground must be kept clear of weeds and the soil occasionally loosened with the Dutch hoe. When the plants have become established and the young canes in the growing season have made about a foot of new wood, all useless suckers should be pulled away in order to admit light and air to such canes as are selected to remain. When the fruit is gathered the canes that have borne it should be at once cut out, so as to give increased space to those intended to bear next year's crop, and as soon as the leaves have



*Raspberry Baumforth's Seedling.*

fallen the latter should be thinned and regulated. After regulating the canes, some recommend that the ground be dug and a quantity of manure worked in about the roots, but it is questionable whether such practice is not a mistake. A better plan is to loosen the surface with a steel fork, and then to mulch with 2 inches or 3 inches of decayed manure, which will protect the surface roots from frost in winter and drought in summer. Of varieties, the best are Fastolf, Baumforth's Seedling (here figured), Scupper Fidelis, Belle de Fontenay, Hornet, and Superlative. T.

**Raspberries and frost.**—Mr. Prinsep's note on the above (p. 329) is instructive, as it clearly proves the importance of plenty of room for the canes. Setting aside the deaths which invariably occur in very sharp winters amongst plantations unduly crowded with canes, I contend that the yield is less and the quality of the fruit inferior to that from canes grown on the post-and-wire system. These receive a maximum amount of sun and air, and become stout, vigorous, and thoroughly ripened; therefore able to stand almost any amount of frost. A mistake which we may fall into is allowing all the new canes to grow until the autumn before reducing their numbers. They should be freely thinned as soon as it can be dis-

tinguished which are the best, and the old bearing canes cut away immediately the crop of fruit is gathered. If these details were attended to Raspberry growing would be found much more profitable. I think some of the older varieties, such as Fastolf and Red Antwerp, are hardier and more frost-proof than newer kinds, although some of the latter certainly have larger fruit.—C. N.

### THE APRICOT.

THOSE who have only a fair crop of Apricots this season may think themselves fortunate, as in the majority of gardens they will be very scarce. Hereabouts many gardeners did not protect their trees, the few puny blossoms not being worth the trouble. As soon as the buds commenced to enlarge it could be seen that they would not only be few in number, but much weaker than usual. This condition is attributed by some to the heavy crops the trees have borne the last few years, but I think this idea is erroneous, as trees which have been regularly and freely thinned of their fruit and nourished at the roots were as thin of bloom this spring as those which had been unfairly cropped and ill nourished. My own opinion is that last autumn the wood of Apricot trees, lacking heat, did not become sufficiently ripened, and that in consequence the bloom buds were unable to withstand the terrible frost of February even though only in their embryo state.

It will be remembered that the weather was extremely mild up to the beginning of January, and that the wood of fruit trees generally was then in a soft and sappy condition, so much so, that the wonder to me is that Pears, Apples and Plums are showing such an abundance of bloom with the minimum amount of sunshine that characterises our summers and our too frequently damp cold autumns. Disbudding is carried out in very few gardens, and the trees become such a thicket, that light and heat are much impeded, and stout, well-ripened wood becomes next to impossible, the evil becoming more apparent after a sharp winter. I think the trees need disbudding early, as in the case of Peaches and Nectarines, the growths which spring from old spurs being freely thinned out. Overcropping the trees is a great evil, and must be paid for sooner or later. The branch-withering or paralysis is a great drawback to Apricot culture now-a-days. Time was when this malady was almost unknown. Another common cause of failure, especially with amateurs, is planting in too rich soil. Farmyard manure should never be added to the border, but applied as a surface mulch to established trees bearing full crops. A warm, somewhat sandy soil suits Apricots well, the same being made very firm, and plenty of lime scraps added. In dry summers lack of water causes premature exhaustion and branch-withering, especially with trees carrying heavy crops. Of late years the demand for young Apricot trees has been great, so many amateurs having planted them. This has induced nurserymen to give them a rich soil in order to grow them into a saleable size as soon as possible, but trees grown on poorer land and having thin, matured wood are infinitely better. In a gentleman's garden near here the Apricot thrives in an exceptional manner. The trees occupy a west wall, produce wood of moderate thickness, and almost annually yield immense crops. When the fruit is swelling the roots receive



copious supplies of liquid, poured over a heavy mulching. The gardener has what may be termed a preparatory wall, from which trees are occasionally removed to fill spaces on the Apricot wall proper. The border is of a sandy nature, extremely shallow, and by reason of being an every-day route for foot-passegers, becomes as hard as a turnpike road. The surface is never interfered with except when a tree is removed, when it is found that permeating this hard and limited area is a mass of wiry, fibrous roots which have produced a corresponding top growth. When any of these are removed into the permanent border—which, by the way, resembles the one above referred to—they retain the good constitution they have acquired and go on from year to year. From this I gather that loose borders should be avoided in the cultivation of this fruit, and that the admixture of animal manure lays the trees open to the attacks of those disorders which usually follow a sappy and immature condition of the wood. For those who are not favoured with the best of climates I can confidently recommend Hems-kirk, as being hardy, free-bearing and less liable to die off than Moorpark.

Newark, Notts.

J. CRAWFORD.

#### GRAPE MADRESFIELD COURT.

EVERY season the question as to the why and wherefore this grand Grape should crack so badly under treatment that does not similarly affect say, the Black Hamburgh, invariably crops up, and is likely to do so as long as it retains its popularity. This cracking is a great drawback to the variety, its one great fault in fact, and how to prevent it is the difficulty. According to my experience the berries are far more liable to crack in some localities and even in some positions in a garden than in others. The treatment, therefore, that answers well in one case may be altogether wrong in others, and what we have to do is to study local circumstances and proceed accordingly. I have tried the plan of keeping the borders constantly moist and the roots liberally fed during the ripening period, but that alone did not stop the wholesale cracking of the berries on the first dull muggy day we had, after colouring had well commenced. Keeping the borders very dry, or to the extent of causing adjoining Vines to flag from want of water was no remedy at all, but on the contrary the check thus given to the enlargement of the berries predisposed them to cracking directly either the borders were watered or the atmosphere of the house became highly charged with moisture. It appears to me that the skins of the berries are either peculiarly tender, or they are more porous than those of most other Grapes, as I have not the slightest doubt now that it is owing to the excess of moisture passing through the skins and uniting with that already there that the expansion and consequent splitting take place. Directly I admitted the correctness of this theory, that is to say the principle of osmosis, my troubles as regards the cracking of Madresfield were practically at an end. Keep up a good circulation of warm dry air and there will be no splitting of berries. In low-lying positions and where the sub-soil of the district generally is of a retentive clayey nature, there is far more moisture in the atmosphere than is the case on higher ground and where there is a gravel or chalky sub-soil. If I am correct in these conclusions, then the Madresfield Court is not a good Grape for low-lying positions, for mixed vineries, or for unheated structures generally. There are times when fire-heat is

absolutely needed in order to keep up the necessary free circulation of dry air. Free ventilation alone will not always prevent moisture from accumulating on the berries, and once they are dewed over it is a case of good-bye to the greater portion of the crop. It is also of importance that low night temperatures be avoided while the berries are stoning, and later on while yet green, as these may lead to wholesale scalding. Warmth in the hot-water pipes, with a little top air on all night, is the best preventive of scalding; and warmth in the hot-water pipes, with both front and top ventilators open a little way all night long and somewhat widely in the daytime, is the surest preventive of cracking. A sudden rise in the temperature—owing to a change from dull, cloudy weather to an outburst of sunshine—must be guarded against.

When the Madresfield Court has a house wholly given up to it there is really no excuse to be urged by those in charge for the loss of many berries by cracking, but in mixed houses the case is different. An extra free circulation of air admitted while yet the berries of any varieties of Grape are swelling fast tends to check this progress, the largest berries being had with the aid of a more or less moist atmosphere, and which does not cause all alike to crack badly. That is one reason why I gave it as my opinion that Madresfield Court is not suitable, as a rule, for mixed houses. Even if it can be prevented from cracking in a fairly moist atmosphere the extra gain in size of berries does not often compensate for the loss of colour. How often are those very fine berries coloured right up to the foot-stalks? Very rarely, if ever. Madresfield Court, as most often seen, is nearly green at and about the foot-stalks of the berries, and is certain to be so unless abundance of air is given almost constantly from the time colouring commences. As it happens, what is a remedy for cracking is also favourable to perfect colouring, and those who would have this noble Grape at its best and cannot afford to give a house wholly up to it, will do well to plant it at the outside end of a compartment, so as to be able to give it air very freely without subjecting the other varieties to more of it than desirable. With me it never failed to colour well, and the secret of it lay in the fact that several squares of glass were taken out at the ends and half-inch mesh galvanised wire netting substituted. Some of these openings were made exactly opposite bunches, and there was no mistake about these being the most perfectly coloured and carrying the best bloom. There was no green to be seen in the berries after they were once ripe, and if they were smaller than desirable they did not present a somewhat polished appearance, but, on the contrary, carried a thick bloom.

W. I.

**Apricots.**—Apricots are not fruiting in our garden (South Bucks) this year. The bloom was somewhat thin and the trees have not set more than half a crop. Last year's crop was a heavy one; the trees also made good and healthy growth, but probably it was not sufficiently ripened to produce a full complement of fruit buds and blossom this season, although other wall trees—Plums, Peaches and Nectarines—in the same garden give promise of abundant crops.—C.

**Strawberry Noble.**—I very much question if any variety of Strawberry has given a better return than Noble. I quite agree with "E. M." (p. 329) as to its cropping qualities and its value when lifted. The value of Noble is its robust habit. In forcing as "E. M." advises it is necessary to do it slowly to get the best results, as if at all hurried Noble fails to set its flowers, but if given time it answers admirably. A large grower near me allows his plants to remain out till the

end of February after layering as described (p. 329), lifting them carefully, potting up and standing under a north wall for a month. He then forces in a cool house and supplies the market just at a season the forced fruits are over, getting a very good return and at a small amount of labour. I note it is still much employed by hybridisers, its bold habit and free growth making it valuable in this respect.—W.

#### FRUIT PROSPECTS IN MAY.

A LENGTHY run through East Anglia and some other counties enables me to give a pleasing account of our fruit trees and bushes in bloom. The season within the last few weeks has advanced by leaps and bounds. Little more than a month ago most people were accepting a late season as a matter of course, but April showers and other causes have already put the growth and flowers of the year abreast of the calendar. So early as the first week in May most of the fruit trees were already out of blossom, and the glorious ten days of May sunshine have done much to set the fruit of Plums, Pears, Cherries, as well as to foster Peaches, Nectarines, and Apricots on walls to abnormal size and earliness. The Apple blossom, now in full glory of purple and white, has been the crowning glory of May. Next to the Apple blooms, Cherries have been the most profuse in flower, and all, with the exception of May Dukes, seem setting and swelling fairly well. I find that the May Dukes have neither been blighted nor frozen, but picked off. The birds prefer these in bloom to Black or White Hearts or any other Cherries. In not a few localities, too, Cherries this season came into bloom rather before their time. The order of blooming may generally be stated thus: Black Thorns or Sloes, Damsons, Gages, and other Plums, Cherries, Pears, Apples. This season Cherries were ahead of Damsons and Gages.

Plums of all sorts also showed some striking peculiarities in blooming this year. As a rule the blossom comes well abreast of the foliage. The bloom is so profuse and plentiful, that there is nothing else, no green visible. Those who watched for this whitening over of their Plum gardens and orchards this year were disappointed. Throughout the spring so far their trees have been green, not white. This arose, however, less from the paucity of flowers than the time of blossoming, for this season the growths of Plums were a week or more ahead of the blooms. Hence in most of the orchards I have seen there are Plums enough for an average yield. The brilliant sunshine during the first fortnight of May has also made short work of the setting of most of our fruit crops. The longer and wider my experience among fruits, the deeper my conviction that a rapid set is the most favourable to the free swelling and perfect finish of our crops. With a sunny May up to the 15th or 20th there will be a good set of Apples throughout the southern, midland and eastern counties, and seldom has there been a more magnificent blossoming, never a finer, cleaner, earlier growth of foliage.

D. T. F.

**Thinning Grapes for exhibition.**—Although Grape-thinning always demands great care, yet when the bunches are intended for exhibition more precision is requisite. We often see the shoulders of bunches at shows in a loose, irregular condition, entirely spoiling the general appearance of the bunches. In many instances too many berries are taken out from the upper portion of the shoulders, causing them to fall about when placed on the board. As a rule very few berries should be removed from the tops of the shoulders, the berries beneath will push them up as swelling goes on. More shoulder-thinning is needed with some free-setting varieties, but even with these discretion is necessary if exhibiting is intended.—J. C.

**Apple King of the Pippins.**—This well deserves the note at p. 310 by "W. G. C." and the

praise he bestows upon it. I am sure, taking everything into consideration, it may be classed as the best all-round dessert variety grown. "W. G. C." rightly places it second to Cox's Orange and Ribston. I have never failed to fruit the King in this part of the country, and in the north it was the most reliable kind. In the west of England it was simply grand; the tree was not only most prolific, but the fruit was of very good quality. The illustration at p. 310 hardly does it justice when grown in a good loam. Those who have not included this variety in their collections certainly lose a quantity of good fruit, as the King often fruits when all others fail. Few varieties are more reliable and the fruit keeps a long time.—G. WYTHES, *Syon House*.

## TREES AND SHRUBS.

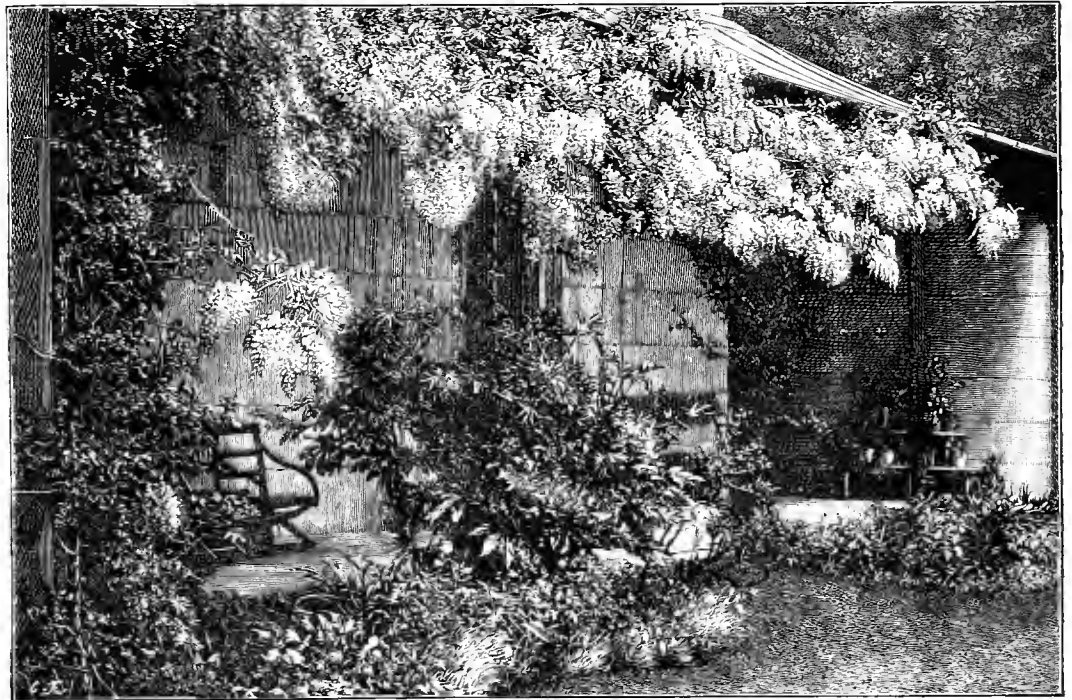
### THE WISTARIA.

THE Wistaria is again flowering with its usual profusion, not having suffered in the slightest degree from the extreme cold, which accentuates its worth as a garden climber. There is plenty of good specimens about, but it is a pity that people do not plant it even more freely and in varied ways as suggested above. The exceeding beauty of old specimens is surely worth striving after, and although they represent many years of growth, it is a fast growing plant, and we have not long to wait before getting some flowers in return if we plant it under favourable conditions in free light soil. In exposed places the flowers of Wistaria are sometimes injured before expansion by late spring frosts, but in favourable years they escape, and then the Wistarias are seen to the best advantage, as, in addition to the blooms, the freshly expanded foliage is thus, in common with that of all outdoor trees and shrubs, very fine. The Wistaria is generally treated as a wall plant, but it has also a beautiful and picturesque appearance when so situated that its vigorous branches can ramble into the head of a neighbouring tree. If planted with this intention, a mistake too often made should be avoided—viz., that of planting the climber too closely to the tree which is intended as its support, for if planted close to the trunk of an established specimen the new-comer is simply starved to death. The Wistarias, too, are well suited for arbours, and a large specimen just supported by a framework of some kind forms a beautiful object on a lawn. Though one seldom meets with any Wistaria except the Chinese form, there are several others, one or two of which are perhaps worthy of being planted to a greater extent than at present, but as they are of far more recent introduction than the one above mentioned, the plants are small, and, consequently, cannot be compared with those of the older species. A promising variety is the white-flowered form of the Chinese Wistaria (*W. sinensis alba*), which appears to be a counterpart of the type, except that the flowers are pure white. A very pretty effect might be produced by planting this and the ordinary form in such close proximity to each other that as they grew up the branches of the two would intertwine one with the other.

**Cerasus Mahaleb.**—The wood of this is much sought after for cabinet work, as it is very hard and takes a good polish, and in addition to this it

has an agreeable perfume. Apart from any of these considerations, however, it is well worth planting as an ornamental tree, for it forms a rounded head whose slender shoots are clothed with ovate leaves of a pleasing shade of rather pale green. The flowers, which are pure white, are small and borne in rounded racemes. They are so numerous that a good example is when at its best quite a mass of white, and this is, as a rule, towards the end of April or early in May. Though the typical kind is remarkable for its graceful style of growth, there is a variety—pendula—which is much more so. In this all the minor shoots have quite a drooping tendency. It is not, of course, as weeping as some other trees, but the shoots are just sufficiently drooping to impart a grace and elegance to the entire tree. Though it will attain the dimensions of a tree, *Cerasus Mahaleb* will often form a densely-branched shrub-like specimen. One great point in favour of it is that it will succeed in dry, sandy or stony soils better than most subjects, and this, combined with its graceful habit and profusion of bloom, should render it worthy of more notice than has hitherto been bestowed upon it. The

as a rule retains its colour throughout the season, unless red spider attacks the foliage, which sometimes happens during a hot summer, or very fierce sunshine is apt to scorch the leaves. The pale pinkish flowers of this variety are inferior to those of many other garden forms. *Spiræa opulifolia aurea* is less in stature than the normal form, while it is one of those shrubs that lose a good deal of their colouring as the season advances. It is wonderfully pretty quite early in the spring, just as the young leaves are unfolding. Then the warm brown branches are studded with golden tufts of partially expanded foliage, which at a little distance look like yellow blossoms. The golden-leaved form of the Mock Orange (*Philadelphus*) is a pretty shrub, less rich in colour, it is true, than some others, but still well worth planting: it does not attain the dimensions of the common kind. *Cornus Spathi*, which has within the last three or four years attracted more attention than any other golden-leaved shrub, is certainly one of the best of that tint that we have in our gardens. The leaves, which when expanding are tinged with bronze, become of a clear golden hue, except an irregular-shaped blotch of



*Wistaria over a balcony.*

**Mahaleb Cherry** is indigenous to the greater part of Europe, particularly in the mountainous parts of France and Switzerland, and in a wild state it varies, according to the position in which it occurs, from a tree to quite a bush. According to Loudon, it was introduced into this country in 1714. By the Kew authorities the generic name of *Cerasus* has been superseded by that of *Prunus*, so it must now be referred to this genus.—T.

### GOLDEN-LEAVED SHRUBS.

WHILE several of our golden-leaved shrubs are very beautiful just now, they do not all retain the yellow tint throughout the entire season. A particular instance of this is to be found in the dwarf-growing *Ribes alpinum pumilum aureum*, the leaves of which when first expanded are of a beautiful golden tint, but by midsummer a great deal of its characteristic colouring has gone and the leaves soon become quite green. The golden-leaved Elder, on the other hand, is at its best during the hot days of July and August, especially if it is in a position fully exposed to the sun and in not too rich a soil. *Weigela Looysmani aurea*

green in the centre. *Ligustrum ovalifolium elegantissimum* is a beautiful golden Privet, whose style of marking is in much the same way as that of the *Cornus* just mentioned. The Privet is, however, almost if not quite evergreen, so that its season of beauty is spread over a longer period than that of the other. It is sometimes used for winter bedding, and if the weather is mild it is very effective. *Ptelea trifoliata aurea* is a variety of this distinct shrub with golden foliage, and there is also a form of the Hazel (*Corylus Avellana*) of the same tint. Several of our trees have varieties remarkable for their golden foliage, notably an Oak—*Concordia*, rich in colour; a variety of the False Acacia—*aurea*, of a pale greenish yellow; the Golden Alder, a grand subject for the water-side; two or three varieties of our native Elm, a form of the Laburnum, golden both in flower and leaf; and *Catalpa aurea*, whose leaves are larger than those of any other shrub or tree mentioned above. H. P.

**Kalmia glauca.**—Few, I think, will be found to agree with Mr. Webster in his book, "Hardy

Ornamental Flowering Trees and Shrubs," in his opinion of this *Kalmia*, for he says, "This, which has lilac-purple flowers produced in early spring, is not a very desirable species, being rather straggling in growth and with few flowers." That is certainly not the estimate in which it is held by many, for it is at all events regarded by some as among the most desirable of low-growing shrubs that bloom as a rule in the early part of May. The general habit of *Kalmia glauca* is to form a little compact shrub from 1 foot to 2 feet in height, clothed with neat foliage, glaucous on the under sides, while the pretty purplish pink blossoms are borne in such profusion that when at its best the entire plant is quite a mass of bloom. A bed planted with this *Kalmia* forms a remarkably bright and effective spring feature, and as a succession to it we have *Kalmia angustifolia*, a rather upright-growing species that is as a rule under a couple of feet in height. The flowers of this are of a deeper tint than those of the preceding, while there is a variety—*rubra*—darker still. The last to bloom is the larger growing Mountain Laurel (*Kalmia latifolia*), which is well worthy of association with the numerous beautiful garden varieties of *Rhododendrons*. All of the *Kalmias* can be forced into bloom, but they must be brought on gently, as if too much heat is used the blossoms fail to open in a satisfactory manner.—T.

#### SHORT NOTES.—TREES AND SHRUBS.

**Siberian Crab** (*Pyrus prunifolia*).—By far the finest object in flower in the garden here at the present time is a tree 30 feet high, having a branch-spread of 40 feet, of the common Siberian Crab. The tree is standing upon Grass, its lower branches sweeping the turf. Before the blooms are fully developed the delicately pink-tinted buds present a pretty sight.—E. M.

**Kerria japonica fl.-pl.**—Never have I seen this deciduous shrub flowering in such profusion as at the present time. In this neighbourhood there is hardly a cottage garden but can boast of a plant or two. In some instances it is planted at the foot of a south wall. The warmth of such a sunny position appears to suit its requirements to a nicety. Trained loosely to the wall it produces a charming effect when smothered with its rosette-like blossoms of a rich orange colour.—E. M., *Bishop's Waltham*.

#### SOCIETIES AND EXHIBITIONS.

##### ROYAL HORTICULTURAL SOCIETY TEMPLE SHOW.

MAY 21, 22, 23.

ANOTHER Temple show, to use the definition mostly expressed, has been held, and it has proved to be fully equal to its predecessors, if not in some respects the finest yet seen. The arrangement was varied, and that with decidedly better convenience than at previous shows. The first three marquees usually stood on a lower level and on grass, making it somewhat unpleasant should the weather prove unfavourable. On this occasion they were ranged along the broad gravel walk on a higher plateau nearer the Thames Embankment, thus affording quite a dry promenade. The overflow tent for Orchids and the choicer exotics was placed parallel with the foregoing in about the same position as previously, whilst the monster marquee, now a proverbial figure in these gatherings, was at right angles with it and in its usual spot. By this arrangement of the tents the space at disposal for an outside promenade was much extended, thus creating another improvement; whilst yet another was evident in the connecting canvas awnings between one tent and another, so that the entire show could be inspected without going outside should the weather prove to be wet. The entire arrangement reflected the greatest credit on the executive of the R.H.S., whose marquees, it should be stated, could easily have been filled,

entries being refused, reduced and restricted simply from want of space whereon to stage them. Considering that it is not an ordinary exhibition where prizes are offered and won, its success year by year speaks well for the enthusiasm evinced in horticulture around and beyond the metropolis. A few well-known exhibitors were conspicuous by their absence, but this was not felt in such an extensive display as one might expect.

The first marquee on entering the grounds was chiefly devoted to cut flowers and floral decorations, the latter showing a marked advance in quantity, whilst the quality was fully maintained. Notable here were the unique displays of Messrs. Perkins and Son and those of Mr. Chard, the former of most *riche* character, the latter somewhat light and airy. Messrs. B. S. Williams and Son and other fresh exhibitors entered in this section for the first time with most praiseworthy produce. Other exhibits in this tent comprised choice selections of vegetables, notably salading from Messrs. J. Carter and Co., excellent vegetables from Mr. Wythes and other well known growers, fruit from the same and other sources, also the florists' Tulips in the competitive classes, which were shown well. In the second tent were to be found several specially good exhibits, most prominent amongst which was the comprehensive one from Messrs. Sutton and Sons, who have never before staged so fine an exhibit demonstrative of practical gardening. Of very special note here were the several kinds of early Peas in pots, finely grown, also of Tomatoes heavily fruited, with other fine produce. Carnations, Cannas, cut flowers and Ferns from other sources filled this tent. The third marquee in this line comprised a very prominent exhibit of Filmy and other Ferns, also of alpine plants on rockwork, a very instructive and suggestive method of staging. Another grand display in this tent was that of Messrs. Veitch and Sons, who staged a fine assortment of *Streptocarpis*, including the new *S. gratus* hybrids, which are a coming race in this genus. With these were their new hybrid Cacti, Ferns of the best kinds and *Gloxinias*, other exhibits comprising cut flowers in quantity. Next in order came another Orchid tent, itself far beyond the average of such erections; this was filled to overflowing with choice collections of Orchids from such well-known exhibitors, growers, and importers as Messrs. H. Low and Co., Messrs. Charlesworth and Co., and Mr. Jas. Cypher, all of whom on this occasion may fairly be said to have excelled themselves. Smaller collections came from Messrs. W. L. Lewis and Co., Southgate, and others. *Acers* in choice vars. came from Messrs. Fromow, a pretty exhibit. Roses were here staged by Mr. F. Cant and Messrs. Jackman, also *Cilicolarias* by Messrs. James and Son. This tent also contained a most noteworthy exhibit in the new and rare plants staged by Messrs. F. Sander and Co.: prominent amongst which were new *Dracenas*, one quite a unique species, viz., *D. Godseffiana*; also of dwarf growing, richly coloured variegated *Begonias*, and of *Heliconias* resplendent in colouring. Grandly grown *Sarracenias* were included here also. *Pelargoniums* from Slough and elsewhere in a blaze of bloom helped to enliven one end, as did that splendid exhibit of cultural skill to be seen in the immense bank of *Leschenaultia biloba* major in perfect condition and profusion of flower from the now well-known growers of this fine old hard-wooded plant, Messrs. W. Balchin and Sons, Hassocks, Sussex, with which were included equally good examples of *Boronia serrulata*. *Begonias*, too, of the tuberous section were staged in this tent, making a magnificent display, both Messrs. H. Cannell and Sons and Mr. Thos. S. Ware contributing large and splendid groups, high class culture being evinced in each instance. On entering the large marquee the first group to attract notice is a superb display of Malmaison Carnations from Mr. Jennings, gardener to Mr. Leopold de Rothschild, who has previously shown these in very fine condition, but never better than on this occasion. Orchids and Roses were the two

prominent features in this tent, the former fully maintaining their position, whilst the latter were never seen in finer condition before, those noted growers Mr. Chas. Turner, Messrs. W. Paul and Son, and Messrs. Paul and Son vying with each other in their respective groups. Most noteworthy of all the Roses shown were the superbly-flowered plants of *Crimson Rambler* from Slough, staged in diversified forms of training. Splendid groups of hardy-flowering trees and shrubs (a unique display) and of *Caladiums* came from Messrs. J. Veitch and Sons, another of the latter, also excellent, being contributed by Messrs. Peed and Son. Clematises from Messrs. R. Smith and Co., Worcester, added to the display in this tent, as did the two suggestive decorative groups of Mr. Icton and Messrs. Wills and Segar, which competitive exhibitors would do well to imitate.

#### ORCHIDS.

Sir Trevor Lawrence, as usual, had a magnificent exhibit, in which there was a great variety of choice things. *Masdevallias* were in strong force, comprising *M. Harryana Denisoniana*, very rich in colour; *M. Mundyana*, of a deep orange shade, very distinct; *M. Veitchiana*, extra fine; *M. Gelenium*, of dwarf growth; and *M. Harryana miniata*, an intensely deep scarlet. Of *Odontoglots* there were also several choice varieties, particularly of *O. crispum* and *O. Pescatorei*. *O. vexillarium* was also included. A most noteworthy exhibit in this group was a very fine mass of *Anacochilus* in most luxuriant health. Other exhibits in this group comprised *Cattleya Mossie* and *C. Mendeli*, both in good character. *C. Schilleriana* is rarely seen so healthy. *Laelia purpurata* was represented by some grand varieties. Of *Cypripediums* there was a grand example of *C. Stonei platyanium* bearing two spikes each with as many blooms of extra size and finely coloured, the petals broad and well marked, with both the upper and lower sepals of equally fine proportions; this plant was a centre of attraction. Other good varieties of *Cypripediums* included *C. calanthum* showing its affinity to *C. Lowi*; *C. Hookeri voluteatum*, extra good; *C. barbatum*; *C. Lawrenceanum*; *C. Lawrencei*, specially fine; *C. superciliale* and *C. Swannianum superbum*. *Dendrobium Bensoni*, with two dense racemes, was very fine; *Vanda suavis*, a dwarf plant with a good spike; *Oncidium Rogersi*, with two dense spikes; *Epidendrum Stamfordianum*, a grand specimen in the finest possible condition, covered with dense spikes of bloom; *Dendrobium revolutum*, a small species of singular growth; *Oncidium macranthum*, dark in colour; *Vanda tricolor*, with four spikes; and *Epidendrum radicans*, well-flowered, were also shown. A well-bloomed *Calanthe veratrifolia* was also included, as well as *Microstylis macrochila*, a singular Orchid of dwarf growth.

Baron Schroder, The Dell, Egham, occupied his usual post next to Sir Trevor Lawrence on and at one end of the centre stage in the large marquee, his collection being fully up to the standard of past years, the whole group forming a wealth of floral beauty. Of specimen examples there was a grand mass of *Ada aurantiaca*, finer by far than it has been previously seen, being one mass of flower-spikes. Of *Cattleya Skinneri* there was also a fine specimen, with nine dense spikes of richly coloured flowers. *Odontoglossums* were in strong force, *O. crispum apium* (the variety beyond compare) being present, the stout spikes carrying fourteen flowers and buds of large proportions. *O. excellens* bore a stout, dense spike, the flowers richly coloured. *O. Wilckeanum giganteum* bore a gigantic spike of unusually large flowers, the ground colour creamy white, the dark chocolate spots being in marked contrast. The flowers of this *Odontoglot* are fully 5 inches across. *O. crispum xanthotes*, the pure white variety, with golden spots, a charming form; *O. crispum* in choice varieties; *O. luteo-purpureum*, very dark in colour; *O. vexillarium*, a specially rich form in point of colour; and *O. nebulosum*, a most beautiful variety, were also shown. *Cypripedium levigatum Rebelini*, a very choice form, had four

spikes; *Masdevallia Veitchiana grandiflora* was shown extremely fine, the flowers of unusual size and colour; *Laelia purpurata* was present in very choice varieties, notably *L. purpurata Schrödera deliata*, a lovely form. Another gem was to be seen in *Laelia Cattleya Hippolyte* of deep colouring. Amongst other choice things were *Cypripedium Sanderianum*, with long tail like appendages; and a grand plant of *Masdevallia nycteryna*, one of the most beautiful of the dwarf varieties with about three hundred blossoms.

Mr. S. Ellis, Hazelbourne, Dorking, staged a splendidly grown group of *Odontoglossum crispum* in the choicest vars., notably the light forms, which with the following constituted a most attractive exhibit: *O. Pescatorei* in beautiful condition, *O. citrosimum*, *O. luteo-purpureum*, a fine spike; *O. ramosissimum*, a charming small variety, very elegant; *O. cordatum*, *O. Coradinei*, a fine plant with five spikes; and *O. polyanthum*, extremely fine, a well marked form, the group as a whole looking most attractive.

From Earl Percy's collection at Syon House Mr. Wythes staged a thoroughly representative group of the best Orchids now in season, containing a great number of varieties and fewer duplicates than some exhibits. *Vanda teres* was here shown well, the plants extremely healthy. *Cymbidium Lowi* was in its best forms, several spikes carrying over twenty flowers, one form being specially good, with the crimson of the lip of a deep shade. *Laelia purpurata* was present in the best varieties, the flowers of large size, one white variety being extra fine. *Cattleya Mossiae* was here shown well; so also was *C. Mendeli*, as well as *C. Skinneri*. *Dendrobium thysiflorum* in this group was specially good, bearing long dense racemes. *Odontoglossum citrosimum*, *O. vexillarium*, *O. cordatum*, and *Dendrobium suavisimum* were all good.

From Mr. S. Cooke came a small exhibit which comprised capital forms of *Odontoglossum Alexandrie* (*crispum*), *O. Ruckerianum*, *O. nebulosum*, *O. Lindleyanum maculatum*, *O. Coradinei*, *O. cordatum*, and *O. Pescatorei*.

Messrs. F. Sander and Co. as usual staged a magnificent group, occupying a greater space with Orchids alone than any other exhibitor. Of *Oncidium sphaecelatum* there was a grand specimen, forming a fine feature. *Odontoglossum vexillarium* was staged in large numbers, both light and dark forms, the plants in the best of health. Varieties of *Microstylis*, in several very singular species, were shown in a pan by themselves. *Dendrobium Auguste Victoriae*, a tall-growing species, with long spikes of light coloured flowers, a beautiful variety; *Laelia Cattleya Phoebe*, a charming hybrid in the way of *L. C. Hippolyte*, with the sepals and petals of a lighter shade of orange, a choice plant; *Odontoglossum crispum* *Duchess of York*, a pure white form, with pale gold markings on the lip; *Cattleya Lawrenceana*, of specially deep tint; *Odontoglossum prionopetalum album*, a distinct form, with the ground colour pure white; *Cattleya Mendeli*, specially fine, the colouring of the lip an intensely deep crimson-purple, a very fine form; and *Cymbidium Lowianum*, an immense specimen, were also shown. *Cattleya Skinneri*, well-flowered; *Aerides expansum*, a very healthy plant with a long spike of flowers; *Brassavola Digbyana*, rarely seen, singularly beautiful; *Cattleya Mossiae Wageneri*, a beautiful example; *Cypripedium Lawrenceanum*, with a number of fine blooms; *Odontoglossum polyanthum*, bearing two stout spikes, very handsome; *Laelia purpurata alba*, with large, pure white flowers, the lip deep purple; *Maxillaria Sanderiana*, a sturdy plant, were also included with several other choice varieties and species. *Cattleya Mossiae Prince of Wales*, a specially fine form with the lip of unusual breadth; *L. purpurata Princess of Wales*, a distinctly beautiful white form; *Spathoglottis aurea*, very bright; *Sobralia Veitchi* (*St. Albans* variety), *Phaius Owenianus*, a dwarf hybrid of rich colour; *Oncidium phymatocilium*, a beautiful and very light species; and *Cattleya dolosa*, a charming species with soft pink sepals and petals, a gem, showing a considerable varia-

tion in colouring, were here to be seen. Of *Cypripedium Chamberlainianum* there was a grand mass, bearing a dozen or more flowers, and of *Cattleya Mossiae* a fine specimen was staged.

Mr. J. G. Fowler, Glebelands, Woodford, had a choice group, in the centre of which was a fine example of *Epidendrum Wallisi*, to which a cultural commendation was awarded. The tops of the bulbs were wreathed in blossom, the rich golden shade of which was particularly striking; *Cattleyas* were a strong feature in this group. *Cypripedium Chamberlainianum* was also specially good. *Phalanopsis amabilis* was here shown well. *Odontoglossum crispum* was staged well, the plants very vigorous and the spikes correspondingly so, whilst the varieties were of the best. *Dendrobium cretaceum*, not often seen, was shown here; also *Oncidium Lanceanum* of rich colour; *Odontoglossum polyanthum* and *Odontoglossum cordatum* were both in good order; whilst of *Cypripedium bellatulum*, a very fine variety of dark markings was present, and of *C. Lawrenceanum* a good specimen was staged. Of quite rare forms were *Cypripedium Lawrenceanum* *Hyeanum* specially fine, the dorsal sepal being of the purest white and deep green; and *Cattleya Mossiae* (Fowler's var.), void of the purplish crimson lip, this giving place to pale gold and lilac.

Sir F. Wigan, Clare Lawn, East Sheen, had a small but *richoché* group. *Cypripedium Rothschildianum* was shown here extremely fine; so also was *C. Lawrenceanum*. *Cattleya Mendeli* was present in the choicest varieties, specially so in one or two instances. *Cattleya Mossiae Lady Wigan*, a delicately beautiful variety, stood out prominently, as did a fine plant of *Vanda snavis*, bearing an extra fine spike. *Cattleya Schilleriana* had two fine blooms, and Chamberlain's *Cypripedium* was shown well. From Mr. Wells, Bromfield, Sale, came *Cattleya Mossiae*, of rich colour and *C. hybr.* (*C. exoniensis* × *C. Mendeli*).

Messrs. B. S. Williams and Son staged a large group at the opposite end to Messrs. Sander. This comprised a fine selection, with a profusion of flowers. Here were to be seen *Oncidium concolor*, a beautiful dwarf, yellow species, well-flowered; *Odontoglossum crispum* in quantity, specially good, with long, arching spikes; *Cymbidium Lowianum*, still in good condition; *Laelia purpurata*, with fine blooms; *Ada aurantiaca*, *Dendrobium thysiflorum*; *Maxillaria Sanderiana*; *Cypripedium grande*; *Vanda suavis*, with good spikes; *Oncidium sarcodes*, in good colour and fine spikes; *Ornithocephalus grandiflorus* (the Lily of the Valley Orchid); *Calanthe veratrifolia*, with good spikes, very fresh; *Cypripedium Schrödera*, richly coloured; *Cattleya Skinneri*, good; *Odontoglossum polyanthum*; *Oncidium Marshallianum*, extra fine, a choice Orchid; *Cattleya Mossiae*, an extra fine, deeply-coloured form; *Cypripedium Chamberlainianum*, bearing large blooms; *Odontoglossum Harryanum*, here noted for the first time; *Vanda Dennisoniana*, *V. teres*, both excellent, and *Brassavola nodosa*.

Messrs. Charlesworth and Co., Heaton, Bradford, staged in the adjoining tent a large and excellent group, in which *Oncidium Marshallianum* and *O. macranthum* were unusually fine, the spikes being well flowered and the blossoms large as well as rich in colour. *Odontoglossum cirrhosum*, *O. cordatum* and *O. crispum* were all included here, the latter in quantity and good in quality; *O. vexillarium* and other varieties being also staged. *Cypripedium superciliosum* and *C. Lawrenceanum*, with several plants of *C. bellatulum*, were also to be seen. *Laelia cinnabarina* here appeared, also *Cymbidium tigrinum*, *Laelia purpurata*, large plants well-flowered; *Cymbidium Lowianum*; *Cattleya Mossiae*, with an extra fine piece of *Dendrobium thysiflorum*. *Odontoglossum crispum* in one instance was represented by a richly-marked form. *O. Halli* and other species were also noted. *Cypripedium Chamberlainianum* and *C. Rothschildianum*, the latter extra good in colour; *Oncidium concolor*, *Ornithocephalus grandiflorus*, *Odontoglossum ramosissimum* and other uncommon kinds were included here.

Messrs. H. Low and Co. staged the best group they have thus far in their long experience exhibited; this was resplendent from end to end with the choicest varieties of *Cattleya Mossiae*, a speciality of this firm, who appear to have quite a monopoly of the best forms. Some grand masses of this one of the finest of all *Cattleyas* were shown here, quite large specimens and in profuse flower. These forms of *Mossiae* were throughout notable for the breadth and colouring of the labellum, some of the darkest shades and others of the lightest. *Laelia purpurata* was specially good, being present in great variety of colour. *Cypripedium caudatum Wallisi*, the light form of the type, was also included. Of *Cattleya Reineckiana superbissima* there was a good example. *Laelia purpurata Enfieldensis* had extra large and deeply coloured blooms.

Mr. Jas. Cypher, Cheltenham, had a grand group, in which the finest possible culture and choice varieties were combined in a marked degree. *Laelia purpurata*, in its finest possible varieties, was here a most remarkable feature, being the very deeply-coloured forms, particularly good, the purple of the labellum in several instances of the deepest possible shade. Other forms with the purest white in the sepals and petals were to be noted, all being in grand health. *Cattleya Mossiae* and *C. Mendeli*, with *C. Schilleriana*, were also excellent. *Odontoglossum cordatum* of deep colour; *O. crispum*, *O. triumphans*, and *O. Halli* were also staged well, as also was *O. Reichenheimi*, a distinct species. *Dendrobium Falconeri* appeared here, the only instance in the show, two good plants being staged, both freely flowered. *Dendrobium moschatum*, not often seen in any show, was found here with three good spikes. *Epidendrum radicans*, extra fine and profusely flowered; *Phalanopsis speciosa*, a good spike; *Dendrobium Dearei*; *Oncidium concolor*; *Sophronitis grandiflora*, extra good; *Saccolabium ampullaceum*; and *Odontoglossum maculatum* were staged. Of *Oncidium varicosum* there was a very fine plant bearing a strong spike. *Cypripedium grande atratum*, of extra deep colour, a splendid form of this hybrid, was shown here.

Messrs. Lewis and Co., Southgate, staged an attractive group, in which there were several conspicuously fine forms of *Cattleya Mossiae* and *C. Mendeli*, the former comprising several remarkable varieties. *Laelia purpurata* here was again very good. *Odontoglossum vexillarium*, *O. crispum*, *O. cirrhosum*, and *O. citrosimum* magnificent, with extra large flowers, were all included. *Oncidium ampliatum majus*, *O. cornigerum*, and other species were staged here. *Cypripedium caudatum*; *Chysis braetescens*; *Odontoglossum Pescatorei*, an extra fine branching spike, densely flowered; and the old *Dendrobium Pierardi* were all in fine character.

Messrs. Backhouse and Sons showed a beautiful assortment of *Odontoglossum crispum* mixed with small, well-grown plants of *Gleichenias* in variety, the two producing a beautiful effect.

#### ROSES.

These were one of the features of the show, the best display being made by Messrs. W. Paul and Son, of Waltham Cross, whose fine group comprised the best varieties in nearly all sections, in standard and dwarf plants. Among the former we noted W. A. Richardson, Mme. Chedane Guinoisseau, Claire Jacquier, a fine pyramid of flowers, Corinna, Mme. de Watteville, Bouquet d'Or, Mrs. John Laing, Niphotos, and Perle des Jardins. The effect of these mixed with dwarf plants is greatly superior to that of the old banks of specimen plants that used to be shown. In dwarfs, the following were all noteworthy for an abundance of fine flowers: *Violette Bouyer*, *White Lady*, *Gustave Piganeau*, *Caroline Testout*, *Ella Gordon*, *Danmark*, *Victor Hngo*, *Star of Waltham*, *Mme. Fanny de Forest*, a free and little-known white Rose, *Gloire Lyonnaise*, *Ulrich Brunner*, *Queen of Queens*, *A. K. Williams*, *Mme. Lacharme* and *Mme. Montet*. Cut Roses in quantity made a margin to the group—*Gustave Regis*, *l'Idéal*,

Beauty of Waltham, Queen Mab, Sylph, and Anna Ollivier in lovely colour, all admirable. Messrs. Charles Turner and Son, of Slough, also had a very fine group of Roses, showing immense, profusely-flowered specimens of some of the older kinds, as Comtesse de Serenye, Juno, a pretty bright pink kind, and Mme. Lacharme. Other good kinds in standard and dwarf plants were Mrs. John Laing, Camille Bernardin, Mrs. Paul, Margaret Dickson, La France, Celine Forestier, Maréchal Niel, Edith Gifford, Souvenir de S. A. Prince, with many plants of Crimson Rambler covered with bright clusters of flowers. Messrs. Paul and Son, also exhibited Roses largely, some of their specimens of fine size, but wanting a little more time to develop their flowers. The best were Paul's Early Blush, William Warden, La France, with Elise Fugier and Souvenir de S. A. Prince among Teas, and Crimson Rambler and Paul's Single Carmine, in full flower. Messrs. Jackman and Sons, of Woking, showed Roses in fine form, including specimen plants of some of the oldest and sweetest kinds covered with flowers. The best were Mme. Lacharme, Celine Forestier, Anna Alexieff, Duchesse de Morny, Comtesse de Serenye, John Hopper, and Alfred Colomb, all sweet and welcome. Mr. F. Cant, of Colchester, showed pot Roses well in smaller plants, but the individual flowers of high quality, especially in the varieties Mrs. Paul, Merveille de Lyon, Caroline Testout, Ulrich Brunner, Margaret Dickson, Marchioness of Londonderry, with the Teas Niphotos and Souvenir d'un Ami, the group edged with the pretty little Polyanthas Little Dot and Anna Maria de Montravel. Mr. W. Rumsey, Waltham Cross, showed Roses largely, his best being Heinrich Schultheis, large bright rose, Magna Charta, Celine Forestier, Mme. Gabriel Luizet, Souvenir de S. A. Prince, with cut flowers in quantity of Maréchal Niel and Niphotos. Mr. G. Mount, of Canterbury, showed cut Roses, but varied the conventional method by setting up the flowers in alternative boxes on a much greater length of stem. It involves the sacrifice of some wood, but the result is a great gain artistically. The varieties set up in this charming way were Catherine Mermet and Mme. Gabriel Luizet. Other H.P.'s and Teas were well shown by the same exhibitor.

#### STOVE AND GREENHOUSE PLANTS.

Messrs. Sander and Co., St. Albans, had a group of new and rare plants, some of striking beauty, including *Sarracenia flava* and *S. flava picta*, represented by two very fine specimens; *Darlingtonia californica*, large and well grown; *Arisema fibratum*, with grey and purple spathe and a curious long drooping spadix, fringed with dark hairs; *Dracaena Godseffiana*, a distinct and beautiful species, quite unlike any other kind, of tall, branching growth, with long pinnate leaves, the leaflets ovate and green, profusely mottled with pale yellow; *Eriocnema Sanderæ*, with large, broad, corrugated leaves of a deep olive-green colour, shaded with brown and covered with hairs, silvery lines following the venation of the leaf; and *Heliconia illustris rubricaulis*, magnificent in its colour of stem and leaf, the leaf-stalks red, the blades reddish green, spotted and veined in an indescribable way. In habit of growth this *Heliconia* resembles a *Canna*, but in leaf beauty it is one of the most remarkable introductions of recent years. *Dracaena Sanderiana*, with white and green striped leaves and of tall, graceful growth; *Maranta Sanderiana*, broad, deep green leaves, with light-coloured stripes; *Bentineria Nicobarica*, a handsome new and quite distinct Palm; *Hemantus Kalbreyeri*, the true form, with crimson flowers; *Asparagus albanensis*, a light, graceful variety; *Anthurium albanense*, with deep-coloured spathe; *Sonerila* in variety and *Begonia Rex* were noteworthy. Messrs. J. Veitch and Sons showed an extensive lot of hybrid *Streptocarpus* in many shades of colour, from pure white to deep violet-purple, also another race of hybrids from *S. gratus*, of quite distinct character both in leaf growth and flowers. The main leaf of each plant is long and broad, whilst the flowers are more numerous in the truss,

and differ in shape and disposition, resembling those of a *Tydea*, whilst they are inclined to be erect. They embrace soft subdued shades of colour, too, from light rosy purple to reddish purple, but are most effective owing to their profuse bloom. *Phyllocactuses*, also from Messrs. Veitch, were charming in new and bright colours, the best being *Agatha*, soft blush; *Rowena*, deep crimson; *Gordonianus*, light salmon; *Jessica*, rose; *Excellent*, orange-red. *Gloxinias* from the same firm were good, especially Mrs. Donaldson, crimson self; *Ismene*, white with red spots; and *Brilliant*, a most interesting variety, the result of crossing a *Gloxinia* and *Gesnera pyramidalis*, the flowers in shape resembling those of a *Gesnera* and of a brilliant crimson colour. Messrs. Sutton and Sons, of Reading, showed magnificent *Calecolarias*, the plants of large size, profusely bloomed, the flowers fine and very varied in colour. Special mention must be made of the variety named *Cloth of Gold*, with self flowers of pure rich yellow colour. *Princess of Wales* when opening has a spotted flower, but it also becomes a true self of a distinct pale salmon shade. *Saintpaulia ionantha* has never been shown finer than it was on this occasion by Messrs. Sutton, and we noticed some variation in colour from light to deep violet purple. Their *Gloxinias* were also first-rate, large flowers in bright clear colours. Messrs. Hugh Low and Co., of Clapton, had a fine group, their *Caladiums* bright in colour—*Charlemagne*, with red veins on a white ground; Mrs. Harry Veitch, crimson leaf; and *Queen of the Isles*, dark red-veined leaf, margined with white, with deep green edges, especially distinct. *Cannas* in this group were good, the best being *Charles Harrison*, self crimson; *Charles van Geert*, soft orange-red; *L. E. Bally*, yellow, spotted with red; and *Alphonse Bouvier*. The best group of *Caladiums* was that from Messrs. J. Peed and Sons, the plants being noteworthy for their bright colours, and many most charming varieties were shown. *Rose Laing*, with white leaf, suffused with pale pink; *John Peed*, deep crimson centre, green edges; *Ibis Rouge*, red veins, leaf red and white; *Ibis Rose*, soft delicate rosy colour; *Raymond Lemoine*, red centre with white margin; *Michel Buehner*, entirely red, were all first-rate, besides many others that space will not permit of mentioning. Messrs. J. Veitch and Sons also had a group of *Caladiums*, some of the plants fine specimens with enormous leaves, among them *Gaspard Crayer*, *Duchess of York*, soft red, *Lord Derby*, *Henry Irving*, *G. Berger*, Mrs. H. Veitch, and *Cardinal* specially worthy of note. Mr. Hunt, gardener to Mr. P. Ralli, Ashted Park, also showed a fine group of well-grown bright-coloured *Caladiums*, and Mr. W. Iector showed a small group. *Begonias*, always a feature, were represented by several large groups, the best being that from Mr. Ware, of Tottenham, the arrangement lightened by using a few small Palms and Ferns, adding to the effect and somewhat relieving the flatness of this flower when arranged in a solid bank without other plants. The doubles and singles were about equally represented, the best of the doubles being *Maid of Kent*, rosy cerise; *Snowdon*, white; *Beauty of Belgrove*, salmon-rose; *Duchess of Teek*, pale yellow; *Victory*, scarlet; *S. Pope*, cream-white, with *Picotée* edging of bright rose; and *White Camellia*. The finest singles were *Challenger*, crimson; *Lord Byron*, light red, white centre; *Zanda*, soft cerise; *Violacea*, deep crimson; *Empress of India*, rosy red, white centre, with crimped petals; and *Moravia*. Messrs. H. Cannell and Sons, of Swanley, also had a large group, the best being Mrs. Phipps, salmon-rose; *Lord Rosebery*; *Lady Cook*, soft rose; and *Mary Cannell*, bright rose—all double; and *Primrose Queen*, pale primrose; *Miss Clark*, white centre, edged and suffused with red; and *Lady Henry Grosvenor*—all first-rate single kinds. *Gloxinias* from the same exhibitor were fine, especially *Evantina*, with white throat and lavender-blue petals; *W. Marshall*, deep violet-purple; *Prince of Wales*, brilliant crimson self; *Princess of Wales*, red, edged with white; and *Byblis*, pure white.

*Cannas* in this exhibit were noteworthy, the best being *Due do Mortmart* and *Mme. Crozy*. A well-arranged group of *Begonias* was shown by Mr. H. J. Jones, Ryecroft Nursery, Lewisham, the kinds single, with fine flowers in telling colours. *Pelargoniums* of the decorative class from Mr. Jones were very good, the plants medium specimens of an informal character and most profusely bloomed. Some lovely distinct new kinds were shown that we need not enlarge upon here, and the same remark applies to the Ivy-leaved varieties. *Pelargoniums* from Mr. Charles Turner were shown in large specimens of the usual formal type, the plants all profusely flowered; *Duke of Norfolk*, red; *Statesman*, soft rose, with dark blotches; *Gold Mine*, light scarlet, with white throat; *Lizzie Coombs*, *Orient* and *Duchess of York*, among large-flowered varieties, and *Lady Carrington*, soft pink; the *Shah* and *Delicatum* in fancy kinds being a selection of the finest. Mr. J. Prewett, Hammersmith, showed *Pelargonium Duchess of York*, a pretty tricolor-leaved variety, and *Pelargonium Glory of the West* from Mr. Godfrey, Exmouth, is a free-flowering decorative variety of cerise-rose colour. *Calecolarias* from Mr. James, Woodside, Farnham Royal, made a telling group, these, like his famous strain of *Cinerarias*, being characterised by their dwarf habit and rich colours. A good group of flowering and fine-foliaged plants was shown by Mr. H. B. May, of Edmonton, notable plants being *Adiantum Lambertianum*, a fine specimen of this graceful Maiden-hair; *Asplenium caudatum*, with hanging fronds quite 4 feet in length; *Platycerium grande*, a large piece; *Coleus Crimson Gem*, with dark crimson self-coloured leaves, and first rate *Gloxinias* in white, purple and crimson-shades. A bouquet of *Tropaeolum Coolgardie* that received an award of merit at a previous meeting this year also figured in this group. Messrs. Balehin and Sons, of Hassocks, showed a beautiful group of hard-wooded plants, the centre of attraction being the blue *Leschenaultia biloba major*, whilst *Erica coccinea major*, *E. perspicua nana*, *Boronia heterophylla* and *B. serrulata* were hardly less attractive, being little grown at the present day. Mr. W. Iector, of Putney, had a fine group of Palms and *Lilium longiflorum*, with a pretty margin of small *Dracanas*, *Pandanus*, *Ferns*, *Ericas*, and *Caladiums*. Messrs. W. Cutbush and Son, of Highgate, had a group of Palms, large *Azalea mollis*, *Hydrangeas*, *Carnations* and *Leschenaultia*. An effective group of Palms, *Crotons*, *Dracanas* and *Ferns* in variety, prettily margined with *Tradescantias*, *Panicums*, *Fittionias* and *Selaginellas*, was also arranged by Messrs. Will and Segar. Mr. Jennings, of Ascott Gardens, Leighton Buzzard, showed a group of Malmaison *Carnations* with flowers of the same large size and high quality as on former occasions. *Carnation Uriah Pike* was represented by two large groups, one from Mr. G. May, of Teddington, and the other from Mr. J. Pike, of Acton. Mr. Turner showed a group of specimen *Azaleas* in profuse flower, and Messrs. Collins and Gabriel sent plants of a yellow *Carnation*. A fine group of *Clematises* came from Messrs. R. Smith and Co., of Worcester, the best varieties being *Pride of Worcester*, mauve-blue, *Madame van Houtte*, pure white, and *Lady Caroline Neville* in single-flowered kinds, and *Belle of Woking*, double. Messrs. Jackman also had an interesting lot of their new race of *C. coccinea* hybrids, the most distinct being *Sir Trevor Lawrence*, crimson, *Countess of Onslow*, which was certificated last year, and *Duchess of York*, pale blush, a lovely kind. A pretty group of *Ferns*, *Palms* and *Amaryllises* was shown by Mr. Perkins, gardener to the Hon. W. F. D. Smith, Greenlands, Henley-on-Thames, and Mr. J. T. Bennett-Poë showed good specimens of *Streptosolen Jamesoni*. Mr. Empson, gardener to Mrs. Wingfield, Amptill House, Beds, showed *Anthurium Andreamum*, *Dracaena australis*, a pretty variegated form, and *D. Doucetti*, also variegated. Early flowering and fine-leaved shrubs were well shown in a grand group from Messrs. J. Veitch and Sons, many excellent things being present that space will not permit of enumerating.

Messrs. Fromow and Sons, of Chiswick, showed a fine group of finely-coloured-leaved Maples and other shrubs. Messrs. W. Paul and Son, of Waltham Cross, sent an interesting group of shrubs in which Lilacs were a fine feature, and Messrs. J. Cheal and Sons, of Crawley, sent an interesting lot of seasonable shrubs. Rhododendrons in many choice varieties made a brilliant group shown by Mr. John Waterer, of Bagshot, and Japanese Maples in variety were also largely shown. Mr. J. H. Johnston, Bignor Park, Pulborough, sent cut specimens of Rhododendrons in variety.

#### FERNS.

These made a pretty display welcome to turn to after the gay masses of plants in flower. Messrs. W. and J. Birkenhead were prominent exhibitors, with a large and varied group of tender and hardy sorts. Some distinct Adiantums were *A. speciosum*, with long arching handsome fronds, *A. monochlamys*, dwarf and graceful, and *A. palmatum*, of erect growth. *Davallia fijiensis elegans* was shown in fine specimens. *Hymenodium erinitum* is a curious species, with broad leaves covered with dark bristles, and *Drynaria musafolia*, although a Fern, has miniature Musa-like leaves, nearly 18 inches long and 4 inches broad. Among hardy kinds, *Osmunda cinnamomea*, *O. Claytoniana*, and *Oncoclea sensibilis* were good, with crested and other forms in variety, but considerable space would be needed to do justice to this comprehensive exhibit. Messrs. Backhouse and Sons, of York, with an interesting exhibit of Filmy Ferns in cases, deserve commendation for showing these most charming Ferns that command much admiration, though few grow them. *Trichomanes reniforme* was a fine piece; *T. meifolium*, graceful, with long fronds; and *T. exsectum*, even more elegant with its finely-cut fronds. *Hymenophyllum* in variety were also represented by many large healthy specimens. A good group of handsome Ferns was also sent by Messrs. J. Veitch and Sons, the most noteworthy kinds being *Adiantum Lambertianum*, an exceedingly graceful Maiden-hair; *A. Weigandi*, with large upright, deep green fronds; *A. Legrandi*, a fine plant with close, compact fronds; and *A. macrophyllum albo-striatum*, in which the pinnae on old fronds are white-striped, whilst the young fronds are of a light red tint, most charming in effect. Other rare, but distinct sorts were *Hemionitis cordata*, which has an entire heart-shaped pointed frond; *Scelopendrium seulariforme*, of dwarf growth, the fronds curiously wrinkled on their edges; *Osmunda japonica corymbifera*, a pretty crested form; *Pteris longifolia Mariess*, most distinct, with long pinnules; *Hymenodium erinitum*, already described; and *Actinopteris radiata*, with pinnules like blades of Grass radiating from the top of the stem.

#### HARDY AND CUT FLOWERS.

These took up a great amount of space, and altogether made a comprehensive display, showing abundantly the wealth of fine flowers that may be had in the outdoor garden at the present time. Mr. T. S. Ware, of Tottenham, had a prominent group, showing specimens in large pots and pans, so that the full beauty of the plants and their growth can be seen. Tree Pæonies, Irises, Spiræas, Globe Flowers, Phloxes, and hardy Cypripediums were in good form. Messrs. W. Cutbush and Son, of Highgate, had a prettily arranged group of Irises, Pæonies, *Heuchera sanguinea*, Globe Flowers, Lupins, and Day Lilies, with a mossy foreground, in which nestled many little alpines. Mr. J. R. Box, of Croydon, showed a nice group, having *Heuchera sanguinea* in abundance, with Pæonies, *Choisya ternata*, *Iris florentina*, *Polemoniums*, *Centaureas*, and Spanish Scillas in large bunches; also Carnations in several kinds. Mr. Ludhams, of Southampton, showed a fine group of characteristic freshness and variety, the best flowers being *Aquilegas* in many forms, *Camassias*, *Aponogon distachyon*, Globe Flowers, Lupins, *Primula japonica*, and *P. Sieboldi*. Messrs. Kelway and Son made a fine display, Tree Pæonies being the chief flower, of which they showed some lovely new kinds, so

beautiful and important that they will be noted elsewhere. *Iris florentina*, *I. germanica* in variety, *Aquilegia corulea*, *Pyrethrums*, new single kinds in bright crimson, soft rose, and pure white colours, and cut spikes of good *Cannas* completed this group. Messrs. Barr and Son showed Tulips in quantity of all the late flowering types, single Pæonies of great beauty, fine garden flowers that more should grow; *Iris germanica* in several fine kinds, *Primula Sieboldi* in various distinct colours, and large bunches of *Thalictrums*, *Camassias*, *Geums*, Day Lilies and Spanish Bluebells. Mr. M. Priehard, of Christchurch, Hants, showed a group of the best hardy flowers in season, tastefully arranged with rare and lovely alpine plants in flower along the margin. The finest flowers were Globe Flowers in bright colours, Phloxes, *Iris sibirica*, *Verbascum phœniceum*, *Camassias*, Day Lilies and Cypripediums. A miniature rock garden, arranged by Messrs. Backhouse, of York, was literally covered with alpine gems in flower, of which but a tithe can be mentioned, those of special note being *Gentiana verna*, *Ranunculus cortusifolius* and *R. glacialis*, *Dianthus callizonus* and *D. alpinus*, *Symphandra Wanneri*, *Silene acaulis muscoides*, *Delphinium nudicaule*, *Androsace coronopifolia*, and *Arenaria longifolia*, a most distinct species, with grassy leaves and heads of white flowers on stems 9 inches in length. Messrs. Paul and Son, Cheshunt, also showed alpines arranged on a rock garden of shelves or ledges, masses of *Aubrietas*, Phloxes, *Androsaces*, *Saxifrages* and *Primulas* being prominent; cut hardy flowers in quantity came from the same exhibitors. Dr. Wallis, of Colchester, was the only exhibitor of the charming *Calceoliti*, showing several handsome kinds; also *Camassia Cusicki*, which has a tall handsome spike of pale blue flowers, and *Iris germanica* in several fine forms, one of the best being Princess of Wales. Messrs. J. Veitch and Sons showed bunches of many things, the most interesting being *Dodecatheons* in charming and distinct varieties, Spanish Scillas in many coloured kinds, and the lovely *Hyacinthus amethystinus*. Messrs. J. Carter and Co. showed Pæonies, *Doronicums*, single and double Tulips, *Primula Sieboldi* in variety, and good tufted Pansies in pans. Mr. S. Pye, Catterall, Garstang, showed tufted Pansies in large variety, the varieties of Dr. Stuart's raising, in pure and lovely colours, being a feature of this exhibit. Messrs. Dobbie and Co., of Rothesay, also had a fine exhibit of tufted Pansies, comprising all the best known kinds. Messrs. Perkins and Sons, of Coventry, exhibited floral designs and bouquets in their best style, and Messrs. B. S. Williams and Son, of Holloway, showed graceful baskets, bouquets and sprays. Mr. J. R. Chard, of Stoke Newington, made a prominent display with his Arcadian decorations in great variety of design, gracefully arranged with flowers and foliage. The Horticultural College, Swanley, arranged a table charming in its simple beauty, sprays of Smilax and Roses only being used. Bouquets were also shown. Mr. J. Prewett, Swiss Nursery, Hammersmith, showed a pretty rustic design in table decoration. Mr. L. H. Calcutt, of Stoke Newington, had a graceful lot of arches, bouquets and baskets, and Messrs. Phelps and Co., of Cardiff, showed fine bouquets of Roses and Orchids.

Want of space compels us to leave over the report of the fruit and vegetables as well as that of the Tulip show. A list of the awards will be found in our advertisement columns.

**New Tree Pæonies.**—Some notable new Tree Pæonies were shown at the Temple by Messrs. Kelway: the flowers of large size, single or semi-double, and most graceful as compared with those of the full double varieties. The best were Princess of Wales, which has an immense flower of the purest white colour; Duchess of Teck, white, with long, narrow petals; and a white variety, with a blush tinge on the edges of the petals and a suffusion of the same at their base. Lord Iveagh, which received an award of merit,

has a distinct flower of large size, the petals wedge-shaped, narrowing at the base, its colour bright cerise-red. Mrs. J. W. Simcox, salmon-rose; Mr. McMillan, rosy-blush; and Sarah Bernhardt, flesh pink, are all equally beautiful. Such noble flowers ought soon to find a prominent place in many gardens.

**The weather in West Herts.**—There was a very marked contrast between the weather of the past week and that of the preceding one, the latter having been singularly warm and bright, while throughout most of the former the temperature remained unseasonably low and the sky obscured by cloud. The great change in temperature is shown very clearly by the readings of the ground thermometers. On the 14th inst. the temperature at 2 feet deep stood at 58°, and at 1 foot deep at 63°, but only six days later the reading at 2 feet had fallen to 53°, and at 1 foot to 52°. These are great changes in so short a time. A welcome rain of nearly half an inch came on the 17th inst., but previous to this no rain worth mentioning had fallen for three weeks.—E. M., *Berkhamsted*.

## PUBLIC GARDENS.

**New recreation ground for Maidstone.**—The new recreation ground at Maidstone was yesterday afternoon opened by Lord Harris. The site, which covers nearly 20 acres, was the gift of Mr. Balston, of Maidstone (the late High Sheriff for Kent), and its conversion into a recreation ground has cost nearly £10,000. A considerable portion of the ground has been set apart for cricket and football, while a cycling track, believed to be the largest in England, has also been formed.

**Destroying crickets.**—Will any reader tell me how to get rid of crickets in a dwelling house? I have tried insect powder, but find no dead crickets. Cockroaches readily take the powder and it soon kills them.—OLD READER.

\* \* I have twice cleared houses of crickets by blowing insect powder into the holes and cracks where they lived near the kitchen fire. A correspondent some time ago who was much troubled with these insects in one of his glass houses let the fire out for three days, and kept everything near where the crickets sheltered themselves saturated with water. This completely disconcerted them, as they love warmth and dryness. Many crickets during the late frost must have had a very bad time of it.—G. S. S.

#### BOOKS RECEIVED.

"Flowering Plants and Ferns of New South Wales," Part 1.  
"List of Exotic Trees and Shrubs affected by Australian Loranthus and Viscum."  
"Vine Culture under Glass," by J. R. Pearson. Revised and edited by C. E. Pearson. 6th edition. 1s. T. Forman and Sons, Nottingham.

**Names of plants.**—S. N. T.—1, *Keria japonica variegata*; 2, *Piptanthus nepalensis*; 3, *Polemonium coruleum*; 4, *Potentilla* var.; 5, *Geranium macrorrhizon*.—*John Bennett*.—Good forms of *Odontoglossum crispum*.—*H. J. Scammell*.—*Pyrus aria*.—*J. J. W.*.—*Dendrobium bellatulum*.—*J. E.*.—Impossible to name from such a dried-up scrap.—*R. P. Brotherston*.—*Aerides Fieldingi*.—*C. Russell*.—A fasciated flower. It frequently occurs.—*G. P. P.*.—1, *Caragana arborescens*; 2, *Kalmia rosea*; 3, *Calycanthus floridus*; 4, *Cornus sibirica variegata*; 5, *Ribes aureum*; 6, *Philadelphus microphyllus*.—*J. Riddell*.—Both forms of *Odontoglossum crispum*. The *Anthurium* is a remarkably fine form, well worth keeping.—*C. Blake*.—*Lonicera tatarica*.

**The Wild Garden:** or, the Naturalisation and Natural Grouping of Hardy Exotic Plants, with a chapter on the Garden of British Wild Flowers. Fourth edition, with wood engravings from drawings by Alfred Parsons, revised and enlarged. 1cmj 8vo, linen cloth. Price 12s.; well bound in half morocco, 18s. Through all booksellers.

"This is an Art  
Which does mend Nature; change it rather; but  
THE ART ITSELF IS NATURE."—Shakespeare.

## ORCHARD AND FRUIT GARDEN.

### GRAPE GROS COLMAN.

WHATEVER may be said or thought about the flavour of this variety, there is no gainsaying the fact of its being the most profitable late Grape in cultivation. It is the immense berries that seem to please most buyers, and the latter are not, as a rule, very fastidious as to colour so long as it is nearer black than red. Instead of extra fine Muscats fetching double the price of Gros Colman, the reverse is often the case, superior bunches of the latter sometimes realising as much as 6s. per lb., when from 3s. to 4s. only are forthcoming for Muscats. One friend of mine started growing Muscat of Alexandria extensively for the market under the impression there was "money to be made at it," only to find that he had far better have substituted Gros Colman. The Channel Island growers were not particularly slow in finding out what they ought to grow in the place of Black Hamburgh when the prices for the latter fell to such a very low figure, but, unfortunately for them, they are very rigidly protected, and the Phylloxera scare led to laws being made strictly prohibiting the introduction of Vines, cuttings, or eyes. As might be expected, this did not wholly cut off supplies, and at the risk of a fine of £20 several growers contrived to procure enough cuttings of ripe wood to inarch on to their Black Hamburgh stocks and a good start was made. On p. 277 "G. C. R." drew attention to the successful culture of Gros Colman in the neighbourhood of Bath and elsewhere, but omitted mentioning the fine bunches annually shown at Bath and Bristol by Mr. W. Nash, Badminton Gardens, Chippenham. Mr. Nash's bunches, never very large, are remarkable for their good form and the size and finish of the berries. A single large shoulder would appear perfectly characteristic, but when the bunch proper is large enough it is well to dispense with great shoulders altogether. Well-established Vines are capable of producing a greater weight of fruit without the strain injuriously affecting them than is the case with any other variety that can be mentioned, but private growers are not under any obligation to crop unduly heavy, and ought not to do so if they are anxious to have the berries large and perfectly coloured. In particular ought great clumsy bunches to be avoided. Nearly every strong lateral gives two or three "shows," and if that nearest the old wood is coarse and ugly, remove it in favour of the next, which usually is, or can be made of better form. In order to have very large berries the flowers must be strong and the set perfect, at least four stamens or seeds forming in each. There must be no delay in removing superfluous laterals or in stopping those reserved at the second joint beyond the bunch saved, the aim being to admit plenty of light to the bunches long before they are in flower, as well as during the flowering period, a smart tap towards noon each day doing the rest. Thinning the berries cannot well be started too soon. Experts do most of theirs while yet the berries are no larger than the seed of Sweet Peas, and some even go the length of commencing thinning the flowers before they have opened. It is

the central berries in each sub-division of bunch that are or will be the largest, these also having the strongest foot-stalks, and few other than these ought to be left. A well-thinned bunch usually appears over-thinned to the uninitiated, but if two berries are left where one is ample, that means the removal of what would have developed into the finest berries as well as another turn at thinning later on. When berries have to be cut out "at the last minute," that is to say, when they are beginning to press against each other, a very steady hand indeed is required, or otherwise those reserved will be badly disfigured. The rule then ought to be, "thin early and thin severely." If the reduction of the number of bunches is not completed before the thinning is done, it should take place soon afterwards, not waiting till colouring commences or till the grower gets frightened at having left a far greater weight of fruit hanging than intended. I have seen whole barrow-loads of bunches cut from over-cropped Vines when it was far too late to greatly benefit the rest by their removal. Be content with handsome medium-sized bunches, alternating these up the rod, one on every second lateral each side. Quite the reddest ripe berries I have seen of Gros Colman were produced by strong rods inarched on to a large Muscat of Alexandria Vine. Each year these rods gave grand bunches and berries of the largest size, but never once was a bunch cut that would have taken a prize at an average autumn show. It was not the fault of the stock, but rather owing to the temperature of the house that the colouring was so bad. High temperatures evidently favour the swelling of the berries to a great size and perfect ripening in the case of white Muscats, but are altogether unfavourable to the colouring of Gros Colman. Those red berries were of excellent quality and superior to many blue-black berries I have tasted, and another instance is afforded in support of the theory that neither a good nor bad colour is any criterion of quality. At Fordingbridge Mr. Castle used to grow extra heavy crops of Gros Colman, and which were of excellent quality, but the colour was scarcely up to exhibition form, nor ought it to be expected when the crops are exceptionally heavy. I hold that the colouring period in the case of the Grape under notice extends, or should extend, over a greater length of time than is required for any other variety in cultivation. Some of the best Gros Colman I ever grew commenced colouring late in August, and an improvement in the colour was observable as late as the end of October. They were not hurried, as may be imagined, but enough fire-heat was kept up to maintain a good circulation of air both by night and day. One essential to perfect colouring is healthy foliage. There must be no scalding, owing to imperfect ventilation, nor no red spider allowed to gain a foothold. Although the leaves are usually large and stout, they appear to be very liable to burning, and modern vineries with a minimum amount of woodwork and a maximum quantity of glass, in large squares, would seem to be less suited to the variety than are the more old-fashioned structures. So much importance do I attach to the preservation of the primary or first-formed leaves, that I strongly advocate lightly shading the roof where the foliage is greatly exposed to all the sunshine going. A fish-net hung slackly over the roof is sufficient, or a very light shading of lime water may be sprayed over the glass with a syringe as often as need be.

What "G. C. R." advances as to the possibility of over-feeding this Grape when rooting in a heavy retentive soil holds good, I think, in

the case of Grapes generally. There ought to be no fixed times for watering, or rather there should be no general rule laid down. During very hot weather some borders—though, luckily, few in number—require to be watered three times a week. Just now it is my lot to have to do with a soil that must be watered very frequently, and it seems to suit Gros Colman remarkably well. In another vinery that I had charge of for many years a good watering once a fortnight was sufficient during hot weather, and much less often at other times. Cultivators ought always to be guided by the state of their borders. These can easily be probed to a good depth without damaging many roots, and water should be given when the soil is approaching dryness—not much either before or after. It is not such a great amount that is needed if the soil is caught at the right time, but wait till it becomes dry and crumbling, and the chances are one heavy watering will not be sufficient to properly remoisten it. Too much manure, that is to say, too much at one time, is a mistake, not merely in the case of Gros Colman, but with all other Grapes. The roots cannot absorb large quantities, and may easily be injured by an overdose. At the same time, I agree with "G. C. R." that Gros Colman will not thrive in an over-rich soil that may yet be not altogether unsuited to Alicante, Lady Downe's, and such like. Some twelve years ago it fell to my lot to plant a new vinery. The border was formed inside the house, of rather heavy soil, and early in the winter, in readiness for newly-raised Vines that would be large enough to plant in May. During part of the winter and the early spring months a temporary staging was fixed along the front of this house for a rather large batch of Cinerarias. The latter were very highly fed for several weeks, and naturally the drainage from these enriched the border underneath. Out of a collection of the best late Grapes planted in this soil, all grew well but Gros Colman, and this variety failed badly in each instance, to the extent of being a disfigurement to the house for two years. What it seems to revel in is a fresh supply of light loamy compost every second year.

W. IGGULDEN.

**Strawberries and drought.**—I have never proved the value of an autumn mulch on Strawberry beds on light soil more than this season. For several weeks bright sun was accompanied by high parching winds, which drew all the surface moisture out of the ground, so much so indeed, that Strawberry plants grown expressly for runners by the margins of walks and unmulched showed signs of distress. On examining the bearing beds, which were well mulched in December with short litter from the pig yard, the same being well-soaked with urine, I find that the surface soil is as moist and cool as it was when the mulch was applied. Had it not been for this mulch I am confident that our plants would have suffered much and the crop proportionally. Of course, I would not advocate the autumn mulch on heavy, retentive soils, rather waiting till early spring, but I am sure that if applied earlier than is the rule with many, crops would be better and spider less troublesome.—C. N.

**Pruning standard Apple trees.**—The soil at Normansfield, Hampton Wick, is generally of a very light, porous, sandy nature. Perhaps it is for this reason that the rule prevails of somewhat hard pruning or spurring the branches of standard Apple trees. These trees, some twelve to fourteen years planted, have very stout, clean stems, and in all cases the heads are restricted to long stout branches that are treated as cordons, for every side shoot is rigidly cut off. Cleaner or more healthy trees, and there are many of them, could not be found, and so far as the pre-

sent season is concerned, they exhibit promise of a grand crop of fruit. Lord Sutfield is on this soil and under this form of treatment wonderfully robust and healthy, whilst Blenheim Pippin does not seem to grow very rampantly. Cox's Orange Pippin and King of the Pippins are also in very fine condition. It is possible that in strong, retentive soil this form of pruning would prove too drastic and result in the constant reproduction of wood. Here the pruning thus given seems to create an admirable balance as between root capacity and head. It perhaps serves to show that it is not easy to lay down any hard-and-fast rule to serve for all soils, and only personal experience will enable the grower to do the right thing according to surroundings. On sand, Mr. Salter, at Woodhatch, Reigate, prunes his dwarf or bush trees in a similar fashion. Just, indeed, as Mr. Molyneux on the Swanmore chalk prunes his Red Currants, the long branches in each case being close spurred, yet in both cases fine crops are produced. No doubt the method, whilst not so repressive of growth as is sometimes seen in gardens, enables the tree to obtain plenty of light and air, and that is matter of the highest moment.—A. D.

**Disbudding Peach trees.**—Doubtless this is often unduly postponed; consequently the crop of fruit is much affected. There is with many a reticence in commencing to reduce the shoots as soon as the fruit is well set. In the meantime the growth on vigorous trees makes great headway, monopolising the bulk of the sap and causing many of the fruit to fall. A second evil is that the tree receives a considerable check when so treated, which is also sufficient to cause the fruit to drop. If piecemeal disbudding is begun very early, commencing at the top of the tree, a secondary reduction may take place in five or six days, and a third and final one before extended shoots have had a chance to rob the fruit of nourishment. If more attention were paid to this important point we should hear less of Peaches failing.—C. H.

#### EFFECTS OF FROST ON FRUIT TREES.

It is worthy of note how the frost has retarded the flow of sap on some kinds of fruit, and this is particularly noticeable with Plums and Cherries. Last spring, and also in 1893, vegetation of all kinds was very forward; the blossom of all kinds of hardy fruit—with the exception of the Apple—had faded and gone long before this date (May 10). Last season, Plums, Pears and Cherries were well advanced by this time; this year, however, the order of things is reversed. The Apple blossom is fully two days earlier now than it was at the same date last year, as there was scarcely a flower open before the 15th of this month; while this spring all—with the exception of a few of the late-flowering kinds such as Court Pendu Plat, French Crab and Northern Greening—will have shed their petals by that date. It was on May 19 that the cold weather set in last year. The Apple trees were then in full bloom, and as we had such a wet period for the following week or ten days together with cold frosty nights, there was but little chance of the pollen getting dry; hence the cause of the scarcity of fruit. Plum trees here in the open orchard, except the early kinds, are only now in bloom; the same may be said of Green Gages and Damsons. The Cherries in the orchards, too, are still in bloom, thus showing the peculiarity of the season. We have sometimes had the fruit on such trees the size of Peas at the end of April, when the Apple trees have only been showing their buds. Why the frost should have taken more hold on Plums and Cherries it is difficult to explain, and I can only account for it by the wood being injured to such an extent as to prevent the sap flowing. Had it not been for the moist weather we experienced during April many of the trees would have failed to have put forth leaves again. I noticed a large tree which had the bark split from the upper branches to the ground by the frost; this has even now failed to put forth any shoots. So far Black Currants

look promising, for neither the frost nor birds seem to have injured them in the least, and as there has not been any serious frost for several weeks we may now hope to have a full crop of fruit. Morello Cherries on both north and north-east walls have set their fruit wonderfully, being more forward than the early sweet varieties growing in the open orchards. How to account for this peculiar freak I do not know, unless it be that the wood was more perfectly ripened and therefore less injured by the frost, as was the case with Cherries of the early varieties growing against south and south-west walls, the fruit of which is now stoning. It would be interesting to know if fruit trees in other parts of the country have been affected in the same way as they have on the cold, heavy soil in this district. It will also be instructive to watch their progress through the summer till the fruit is ripe.

H. C. P.

**Grape West's St. Peter's.**—One seldom meets with this Grape now-a-days, probably on account of its strong resemblance to the Black Hamburg and the comparative smallness of its bunches. I maintain, however, that where room can be spared this Grape is well worth growing, as, independent of its hardness and good setting qualities, it is of excellent flavour, and, keeping better than the Hamburg, comes in most acceptable between that variety and Lady Downe's. The berries are rather small, but they always colour well, and a heavy crop may always be taken from healthy Vines without fear of any evil results. It is all the better for being treated to a comfortable temperature, but does not require strong heat.—J. CRAWFORD.

**Forcing late Peaches.**—There are, I think, many of the so-called late Peaches, and which, it is true, ripen their fruit late in autumn when treated simply to a cool house or open wall, that would readily respond to a warmer temperature and even force well. I have been told on good authority that Late Admirable Peach will force well, and I have myself proved that both Sea Eagle and Princess of Wales do well if started in January and brought on in heat. I have both these varieties in a span-roofed house, side by side with Stirling Castle and Violette Hative, and they follow these varieties in the order named. Sea Eagle has a remarkable constitution, bears continuously and well, and is, especially when ripened under the above treatment, of excellent flavour. Of course we are not short of first and second early Peaches and Nectarines, their names being legion; nevertheless for those who desire extra large, hand-ome fruit for exhibition tolerably early in the season, Sea Eagle and Princess of Wales are worthy of a place in a house that is to be started during January.—J. N.

#### NOTES FROM HIGH ELMS.

ABOUT two miles from Orpington Station in Kent is High Elms, the residence of Sir John Lubbock, and when there a few days ago we made notes of some of the more interesting features of the gardens.

Of indoor plants the greatest attention is paid to the Carnation, and Mr. Morter, the head gardener, has raised many fine seedlings, in which the Malmaison character is shown, these seedlings resulting from crosses with some of the finest varieties in cultivation. None of them were named, but a few were quite worthy of some distinction, especially a fine buff-coloured kind in the way of Mrs. Reynolds-Hole, a clear, shining, yellow-flowered variety. All the plants were in robust health, especially the bluish and ordinary forms of the Malmaison, no spot or disease of any kind appearing on the leaves. The house of Carnations here was bright with bloom, and we were pleased to see that in the seedlings fragrance was strongly marked. This is not always the case, but the fragrance of the Carnation is far too precious to lose. Primula Sieboldi was very fine, and by hybridisation an excellent race has been obtained with a profusion of large flowers of much deeper colour than usual.

Some houses were filled with Caladiums, Dracenas and Crotons. The Caladiums were chiefly represented by that dwarf race shown at times by Messrs. J. Veitch and Sons, of Chelsea. This is a very dwarf class, conspicuous for the tufted habit, so to say, of the plants and the fine colours of the leaves. We made note of the following kinds: Duke of York has deep crimson foot-stalks to the leaves, the blade carmine-rose. Chelsea Gem is one of the most brightly coloured of all, and very attractive with its shades of crimson and carmine. Chelsea Gem, F. W. Moore, Duchess of York, Ladas, Lord Rosebery, and Tennyson, all having this dwarf habit of growth, were also noteworthy. We noticed also several of the newer Dracenas, such as Frederici, Jamesi, with narrow, graceful, chocolate and crimson leaves, and Lord Wolesey, whilst striking for its curious and distinct magenta-shaded foliage is Strobilanthes Dyerianus. Brugmansia suaveolens was flowering freely, its large trumpet-shaped, creamy-white flowers filling the house with their powerful perfume.

The fruit houses were filled with the usual selection of trees in the best of health, and Strawberries promise well for a splendid crop. Chief reliance is placed upon John Ruskin as an early kind.

A considerable extent of woodland surrounds the gardens, and one notices how well the Beech thrives here, forming splendid specimens, now in the full beauty of their spring leafage, whilst in a woodland drive of some miles is "The Beech Walk," an avenue, so to say, of Beeches, meeting overhead and forming a canopy of greenery, setting off the sombre-coloured Conifers and Yews that abound. We are pleased to see that this woodland drive has been opened up to give the many fine trees and shrubs some chance of showing their charming character. Here the lovely Silver Birch is thoroughly at home, sometimes standing by itself or backed by the heavy-coloured Yew. Large bushes of the common Barberry, the silvery-leaved Sea Buckthorn (Hippophae rhamnoides), Laburnums, Lilacs, and the Wayfaring Tree (Viburnum Lantana) are interesting, and suggest how still more delightful such a walk may be made by introducing other beautiful flowering shrubs, of which we have a countless number in gardens. Several trees of the double-flowering Cherry were in full blossom, every branch wreathed with the pure white, double rosette-like blossoms, as if snow had clothed them with a pure white covering. In full flower also were the Bird Cherry, the Chestnuts, the red flowered varieties just tinged as yet with colour, the Laburnums, and such things as the common Spindle tree (Euonymus europaeus) to brighten the autumn landscape. Here and there the mass of bright green is relieved by excellent specimens of Picea Morinda, and Abies Douglasi succeeds remarkably well. The Conifer family, as a rule, has fared badly during the past winter. Here one sees many browned trees, some dead, others so injured as to be worthless. What a lesson the winter has taught planters in the careful avoidance of everything not thoroughly hardy. Trees only just arrived at full maturity have been killed, whilst many things we know to be perfectly hardy amongst flowering trees and shrubs are neglected. By this drive we noticed a large tree of the curious Cytisus Adami. The tree bears racemes of purple and yellow flowers, these appearing not only on the same specimen, but on the same branch. There are a certain quaintness and charm in old examples of this strange supposed hybrid. In the garden and woodland, purple-leaved Beeches impart welcome colour, sometimes against tender green foliage or a Lebanon Cedar, whilst in the garden proper, Pyrus malus floribunda was a mass of bloom. This is one of the most delightful shrubs ever introduced. The graceful tender shoots are smothered with bloom, tender pink, except the crimson buds. A large selection of Spiraeas is grown, and one sees also such charming features as Daffodils planted in a natural way in the grass, an arcade of Roses, Vines, Clematises, and other climbers, while the more stately, hardy, fine-foliaged plants, as Heraclium giganteum, receive attention.



TREES AND SHRUBS.

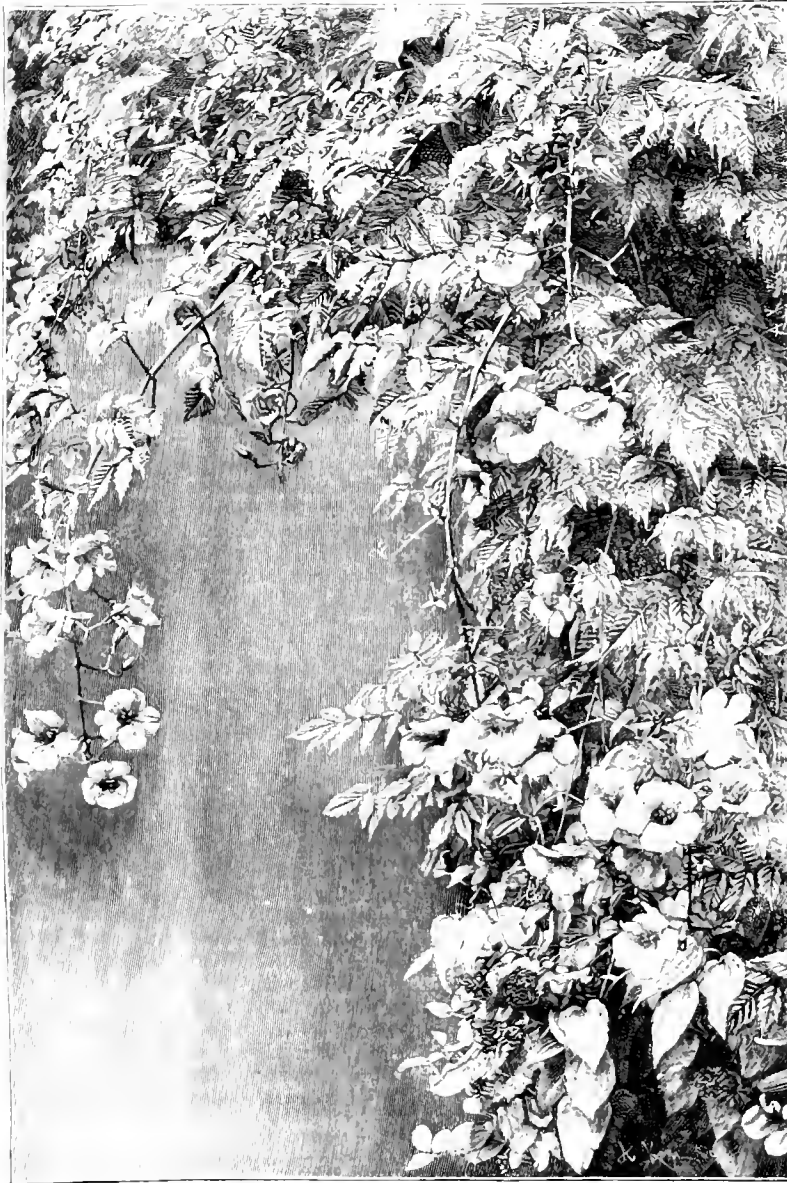
TRUMPET FLOWERS.

(BIGNONIA.)

THE hardy species of this large tropical genus of climbers are invaluable, being so graceful in growth, showy in flower, and vigorous. There are three kinds thoroughly hardy against sunny walls in almost every part of these islands. They are *Bignonia radicans*, *B.*

Trumpet Flower will run up and cover a wall 40 feet high. It is useful also for covering arbours, pergolas, and the like.

*B. GRANDIFLORA* (see illustration), a Chinese plant, is more tender than *B. radicans*, and by no means so common. It is much showier when in bloom, the drooping flowers being twice the size, of a bright orange-scarlet, and produced in large clusters. Its foliage, too, is larger, but the plant rarely grows so vigorously in this country as *B. radicans*. It is a glorious object in bloom and worthy of the best position on a warm sunny wall.



*Bignonia grandiflora.* Engraved for THE GARDEN from a photograph sent by Miss Willmott.

*grandiflora*, and *B. capreolata*. The first two are strictly species of *Tecoma*, but are most generally known as *Bignonias*; therefore the name is retained here.

*B. RADICANS* is a native of the North American States, and is an old garden favourite. Its long wiry stems send out roots like Ivy, and so cling to walls or any support. The pinnate foliage is graceful, and in late summer the shoots are terminated by dense clusters of showy trumpet-shaped scarlet and orange blossoms. There is a variety named major with larger flowers of a paler tint, and the foliage also is more robust. A strong plant of this

It was introduced at the beginning of the century, but never seems to have become very common.

*B. CAPREOLATA*, a true *Bignonia*, is a native of the southern parts of North America, and is quite hardy in all but the coldest parts of England. It is commonly grown as a greenhouse climber, but it succeeds well against a warm wall. It has heart-shaped leaves ending in curly tendrils like a Vine, which enable it to climb high. The flowers, of a true trumpet shape, are large, reddish yellow, and produced, not in clusters, but singly. Given a sheltered spot against a sunny wall, it is a most satisfactory plant, and almost an evergreen.

Other *Bignonias* from temperate countries, such as *B. capensis* and *B. australis*, might be planted against sunny and sheltered walls in the south, where they often flower as freely as in a greenhouse.

TREES AND SHRUBS IN SUSSEX.

ONE would be almost inclined to think that after such a severe winter many of these would fail to bloom. Such, however, is not the case, if we may judge from those already in flower or that have faded and gone. The early-flowering *Spiræas* such as *confusa* and *Thunbergi* were never more beautiful, the long, slender branches of the latter being covered with their tiny clusters of white flowers, which hang gracefully to the ground. *Deutzia gracilis* with me has suffered somewhat, as on the stiff soil the growth does not always get thoroughly ripened; some of the shoots that were well ripened are blooming their whole length and bearing graceful spikes from 2 feet to 3 feet in length. We next come to *Kalmia nana*, with its delicate-looking flowers. *Andromeda Cates-bai* made shoots last season from 2 feet to 3 feet in length, and these are now clothed with clusters of Heath-like flowers their whole length. This shrub is well worthy of more extensive cultivation, considering it is so hardy and presents such a graceful appearance when in bloom. Wherever Heaths will grow this will also thrive amazingly, though it delights in rather more moisture. Large sprays of it remind one of Solomon's Seal at a distance, though on closer inspection it will be observed the flowers are produced in clusters hanging from the undersides of the shoots.

*Azaleas* have never been more beautiful than they are this season; the hundreds of plants alongside the drives and woodland walks quite scent the air with their delicate perfume. *A. mollis* is particularly fine this year, there not having been any late-spring frosts to injure the bloom. The lovely shades of this interesting section are so pleasing, that none could help but admire them. Ghent varieties also look well just now. *Azalea amona*, which is considered by some to be too tender to be planted in the open ground, has passed through the late severe winter almost uninjured, and is now one mass of flower. This plant is much more hardy than some people think, being less liable to injury than either the *Laurustinus*, *Escallonia*, *Arbutus* and such-like plants. *Rhododendrons* of the early-flowering section, such as *R. catawbiense*, *ferrugineum*, *hirsutum*, *dauricum*, *ciliatum* and other dwarf-growing kinds, have all withstood the frost well. These are charming subjects for small beds or the rock garden where the soil is of a peaty nature. Hybrids in a great measure have been but little injured, though a few of the more tender early-flowering varieties had their buds killed, and some of those with rough foliage had the leaves pinched by the frost. One of the most interesting trees here at the present time is a large specimen of *Halesia tetraptera*, which has grown to the height of about 20 feet, its long, slender branches being clothed with Snow-drop-like flowers. How seldom do we meet with this plant except in a small state, and seeing it is so hardy and introduced for so long a time, the wonder is that it has not become more common. *Aralia Sieboldi* has suffered much this winter—so much so, indeed, that I fear large plants which have withstood the frost for the last twenty years are completely killed. Some of the Palms have withstood the frost and are now sending up their flower-spikes. *Magnolias* do not seem to be injured in the least and are flowering as freely as usual. H. C. P.

**Double Lilacs.**—Differences of opinion may exist as to whether double or single-flowered Lilacs are the more beautiful, though for my own part as garden shrubs I prefer the single kinds. One of the best double-flowered kinds is certainly Leon Simon. A good double white variety with exceptionally large blossoms is Madame Lemoine, while a suitable companion, but with single flowers

is Madame Legraye, which is now largely grown for forcing. It is less vigorous than some of the others, but is in every respect a very desirable form. So is Souvenir de Louis Spath, whose massive clusters of richly coloured blossoms cause it to be singled out at once from among its associates. For forcing where the plants are brought much nearer to the eye, and consequently the duplex style of the flower is more apparent, these double Lilacs form a pleasing variety, but there are too many sorts.—T.

## GARDEN SKETCHES.

### CHAPTER XII.

Thanks to the human heart by which we live,  
Thanks to its tenderness, its joys, and fears;  
To me the meanest flower that blows can give  
Thoughts that do often lie too deep for tears.

WORDSWORTH.

NOVEMBER 3.—A few crisp mornings of white frost have brought us into November. The cool, brisk air was pleasant after such continued warmth, and just gave the sense that summer was indeed over, and that the flowers still left with us were precious, because so soon to haste away. Nothing was really harmed, only the fear awakened that the next touch might be blackening to tender plants, so that all should be housed or made safe in the ground by leaf-mould or other protection round the roots. The Ivy-leaved Geraniums have been lifted and potted, and in their place Tulipa Gesneriana has been planted. These should be fine next spring, with the border of silvery-leaved Cyclamen and pale blue Hyacinths. The crimson Fuchsia bed has had the soil renewed by fresh loam and leaf-mould, and it, too, is filled with scarlet Tulips and young plants of Forget-me-not added to carpet the ground in early spring. Then the bulbs of Tulipa Greigi which were lifted in the month of June have been replanted among the white Fritillaries, as this was found to be a charming companionship in the month of April. A few extra bulbs of Chionodoxa Luciliae gigantea and the larger Scilla bifolia and Narcissus Bulbocodium have been added to the rock garden, where the earliest blossoms of the year are to be found in sunny nooks.

And now when the lovely tints of fading foliage are gone, and the strong winds have swept each leaf away from the grey tracery of branches overhead, our thoughts turn naturally to the hidden treasures in the earth, the bulbs with sleeping blossoms, that will wake with the returning days of spring. Our gardens are never without a promise, even in winter's darkest hours, and this is one of a garden's greatest charms, its perpetual expectancy and onward glance to blossoms and to fruitage of which as yet the dormant buds may be all that is visible. No doubt the disappointments of "gardening" are many. There is much waiting, and often our hopes are frustrated by cruel frost, or storm, or drought, or insect pest. But difficulties overcome, courage and perseverance strengthened, and patience cultivated, bring powers of the mind that blossom into more lasting flowers, that cannot be swept away by chance or change.

When our gardens pass from us we are apt to think that our labour is lost and swept away, but it is not always thus, and that others should reap where we have sown is, mayhap, a richer gain than we imagine. The circle of our life must ever be enlarged by those to whom it reaches, for it is not by what we have done for ourselves, but by what we have done for others that the best days of our life must be counted.

NOVEMBER 15.—This morning brought a lovely sight, that of a golden-crested wren

bathing among the blossoms of the Cape Hawthorn (*Aponogeton distachyon*) in the fountain basin. A few stones hold the plant in position, and it was upon one of these that the exquisite little creature stood, and boldly dipped and splashed, itself scarce larger than the flowers, and like a blossom with wings. Now, as the hours of daylight shorten, the old Monthly or China Roses gleam out in all their beauty. Shades of brightest crimson, cerise, blush, and creamy white, all mingled together, give a brightness of colour not equalled by any other out-of-door flower at this late season. In sheltered spots there is hardly a day during winter that a few buds cannot be found on these Roses, while they are the earliest to respond to the first warm days of spring. Their cheerful shining leaves are retained until pushed aside by the fresh swelling buds, so that they have never the bare, winter aspect of other Rose trees. One can scarcely call them perfumed, and yet they have a subtle, delicate odour and scent of freshness which is all their own and very delightful. The old Blush Monthly Rose has been well-nigh a century in our gardens, having been brought to this country in the year 1796. Like other old-fashioned plants, these Roses were set aside to make way for the "bedding-out" system, but within the last few years the love for them has been again aroused, and happily so, for these Roses full of variety and good qualities are a garden in themselves. The Chrysanthemums in the flower border are well in blossom now. Grown in their free, unbudded state they are valuable for indoor cutting, being so much more graceful for vases than one large flower on the top of a stick, the cultured fashion of late. The earliest Hellebores are beginning to lift up their flower-buds. It is pleasant to push aside the leaves and peep at the nests of flower-buds clustered together, some enclosed in their pink sheaths only emerging from beneath, others risen above the ground with pure white buds, all promising a harvest of blossoms for months to come. They are planted everywhere, here and there in the herbaceous border for the sake of their evergreen foliage in winter, in the rock garden, in groups among a bed of American plants, in the fountain garden, and in the walled garden, where the seedlings spent their first year after being planted out. But no matter how numerous they are, there never seems one too many, so highly are they prized in the dark days of winter.

And now as the year draws to a close in which we have recorded the passing of the flowers from week to week and month to month, let us for a moment glance backward and see how the golden thread of blossom has been from the very first interwoven with the web of life. We are prone to forget what the great philosopher tells us, that "God first planted a garden, and indeed it is the purest of human pleasures." In sacred history, flowers are alluded to as emblematic of spiritual growth in man, and looking back through profane history we notice how they have ever mingled in rites and ceremonies of an emotional character. How much the Greeks were indebted to flower and foliage for their decorative art, we learn in the beautiful forms and curves visible throughout their designs. Even in the present day many of our pillars still wear the noble Acanthus leaves with which the old Greeks loved to clothe the capitals of their stately columns. From the earliest ages poets have sung of flowers, and we can all remember the ancient myths in which gods and goddesses were transformed into trees and blossoms. In the waving corn-fields the bread of the world is silently made. From the shade of

the forest our shelter is given. The timber grown there in stillness supplies our every need, until at the end it bears us to our last resting place. The buried flora of past ages blossoms afresh for us in the kindling warmth that awakens new buds and flowers in our hot-houses, so that flowers dead thousands and thousands of years ago can light our earth stars for us now, and the energy conserved for long ages of time in the vegetable blackness of coal leaps forth into flame and gives us the great steam force which has extended our nation and language until it circles the world, and has brought to our shores the richest produce of other lands. Accustomed as we are to the fruits of far countries and all the produce of warmer climes, we never pause to remember that they are borne to us, at least in far the greatest quantity, by the force of a dead flora whose leaves and blossoms once shimmered in the sunshine, and then sank into darkness and oblivion for ages of time.

There are in life many pursuits, many things precious and beautiful, that can only be followed or possessed by the few; but the love for, and enjoyment in flowers is free and wide as the world itself. A queen in her palace garden may walk amid Roses and Lilies, but she cannot receive more pleasure from them than the humble cottager in some far-off lonely vale who has only one "Rose looking in at the window," and whose Lily stems lean against the time-worn walls of her lowly dwelling. A king may have his marble halls filled with rare plants from southern shores and his table adorned with exotics, but there may be a coat of mail beneath the royal robe; while the poor city weaver, free and fearless in his smoke-dimmed chamber in the narrow, darkened street, may enjoy with a right royal heart his bunch of golden Daffodils, set in an old brown jug, but bringing with it the scent of hedgerows and song of lark and flickering sunshine over hill and dale, remembered from his mother's home in days gone by. The finest work is oftentimes formed with the simplest tools; so it is to the poor Manchester weaver, who found time amid his daily toil to love and tend his flowers, that we owe Narcissus Horsfieldi, that king among Daffodils.

And now the after word. Let no one think that he cannot graduate in the school of gardening and pass from it the richer of its many lessons. Perhaps one little flower, the "crimson-tipped Daisy," can tell us what some of these lessons are. Placed wherever it may be, on some lone hillside, buffeted by storm and drenched with rain, trodden under foot in the dusty byeway, unseen and forgotten in some shady copse, shorn of its flowers in some velvet lawn, it is always dauntless, accepting its surroundings no matter how adverse, and so turning for ever a fearless eye to heaven.

L. A. L.

### NOTES FROM A SUBURBAN GARDEN IN SOUTH DUBLIN.

AFTER a winter phenomenal in its length, we can now form some idea as to where we are, and the general verdict about here is, that we have escaped much better than we expected. In my own little garden (and elsewhere) Veronicas of the Andersoni type are utterly destroyed. Of *V. Hulkeana*—which was never injured before—but one plant remains, and that sorely crippled. *V. pinguifolia* is untouched, also *V. salicifolia* (?) and *V. Lavandiana*; the latter was covered up with snow, which doubtless saved it. Similarly, *Pittosporum Tobira* is almost killed, except some branches which lay on the ground and are uninjured. *Olearias* (*stellulata* and *maerodonta*) are also almost exterminated not only here, but at Mount Usher, Co. Wicklow; but lately I saw

at Killiney large bushes of the former absolutely untouched and bursting into bloom. These are growing in a north border where, I am told, they get no sun for six months of the year. Is this the reason they have survived when others have been destroyed? A young plant of *Eucalyptus* is breaking up strongly from the root, while an old *Heliotrope* which has been for years under the sill of my drawing-room window is coming up as well as usual. A healthy little clump of *Gentiana verna* seemed to enjoy the severe winter, and has yielded about fifty flowers. Three or four inches of ice on my 1½-foot deep Lily pool have done no damage to two of *Marliæ's Nymphæas* (*N. Marliæa Chromatella* and *N. odorata rubra*). Numerous flowers and buds are visible on the former. *Sparaxis* and *Ixias*, which were sedulously protected with twigs and hay, escaped pretty well and are now coming into bloom. *Cordylines* are considerably browned, but the central core of leaves is in all, or nearly all, instances uninjured. *Escallonias* have felt the cold considerably, *E. montevidensis* worst, then *E. pterocladon*, while the old *E. macrantha* has become for the time a deciduous shrub, but, with that exception, seems none the worse. This change from evergreen to deciduous is noticeable in other things, such as *Abelia tritloræ*, *Passiflora cœrulea*, *Edwardsia grandiflora* to a less extent, &c. Beyond a very slight scorching, *Choisya ternata* has come well out of the ordeal, and is now covered with its lovely scented flowers; and a similar remark is true of *Rubus deliciosus*, which is blossoming better than I ever had it before. The hardiness of these two is, I think, now beyond dispute. *Ficus repens*, which covers the back of my little stove, has for some time crept out and over the wall outside, and last winter was unable to kill it. Another grand plant which laughs at frost and snow is *Rodgersia podophylla*, as also its comrade and congener, *Saxifraga peltata*, which has this year been literally bristling with flowers. It will, I think, be interesting and instructive to hear what have survived and what destroyed in various localities and under various circumstances, so I venture to contribute my mite of information. G. P.

## FLOWER GARDEN.

### AQUILEGIAS.

THERE are few hardy perennials more generally worthy of cultivation than the *Aquilegias*. Perfectly hardy and enduring in so far as the true perennials are concerned, and in most soils these beautiful plants year by year increase in beauty and number of flowers produced upon individual plants. This is especially true of the larger kinds that are more fitted for the border than of the dwarfier alpine forms. With the exception of *A. sibirica* all the species have drooping flowers, and this fact, combined with the delicate connection of the stalk with the blossom, imparts an exceedingly graceful bearing. *Aquilegias* are best raised from seed, taking care that the supply of the choicer kinds, for example, *A. alpina*, *A. glandulosa*, *A. cœrulea*, and others is obtained from some reliable source. These flowers are so readily cross-fertilised by insects, that it is only with care that seed true to its kind can be secured, either by covering up a whole plant with fine gauze, or a few pods according to requirements. The ease with which these flowers are fertilised has resulted during recent years in a most charming race of plants, among which are many exceedingly distinct and beautiful shades of colour. The propagation of any particular plant of special merit can only be accomplished by very careful division, and preferably in the spring-time. This may also be done early in autumn, say the end of August and early September, but never late in the year. Such divisions are frequently safer if planted in boxes of cocoa-nut fibre and stood in the open

in a somewhat sheltered spot; this is to be preferred to potting and placing in frames, and particularly is this true of the more delicate and rare kinds, either species or hybrids. A deep sandy loam, fairly rich, will suit most kinds well. Some of the taller kinds, and notably *A. chrysantha*, I have never seen finer than when grown in a good fairly stiff loam. In this the plants were most vigorous, attaining in the third year to nearly 3½ feet high and fully as much through, and bearing many hundreds of blossoms and buds. Such fine examples of the larger kinds



1 white *Aquilegia*.

can only be obtained by letting the plants alone. Indeed, these plants are not benefited by transplanting, but generally the reverse, and invariably so if large clumps in the open. Seedling plants of these *Columbines* transplant readily in a young state and well enough for a year later, but to obtain the best results the seedling plants should when large enough be planted at once into their permanent positions. This is equally true when grouping the dwarfier alpinæ in the rock garden as when planting larger beds in the flower garden.

There are many distinct and beautiful kinds, the following being among the best: *A. alpina*,

deep blue; *A. cœrulea* (Rocky Mountain *Columbine*), flowers sky-blue and white, a most charming kind for the rock garden or for pots; *A. chrysantha*, yellow, 3 feet to 4 feet, a most handsome bush when in flower; *A. formosa*, bright red, very distinct and effective; *A. glandulosa*, an exquisite and handsome species with very large deep lilac-blue and white flowers, rarely more than 9 inches high, a grand plant for the rock garden or for pots in a cool house; *A. olympica*, delicate mauve-blue and white, quite a distinct type, height 1½ feet; *A. pyrenaica*, lilac-blue, very effective, best regarded perhaps as a biennial, 9 inches to 1 foot high.

Apart from these there are many varieties, to say nothing of an almost endless supply of hybrid forms of *cœrulea*, *canadensis*, *californica* which provide us with a marvellous array of new, distinct, beautiful, and varying shades of colour. Many of these hybrids are beautifully adapted for pot culture for conservatory decoration, and under glass are decidedly pleasing and effective. E. J.

### NOTES ON HARDY PLANTS.

**Campanula tridentata.**—The first flowers opened on May 14. They are posed salver fashion, but in shape are half cup and half star, *i.e.*, there is a distinct cup of deep purple that could scarcely be covered by a shilling; then the segments of the corolla, which are of a more red-purple, are sharply bent back, and so give the star-like effect. The whole flower may be 1½ inches across, the plant is but 3 inches high, and it has stood quite exposed facing south and at an elevation of 2 feet from the Grass level. Here we have something fresh, and certainly a plant of the first rank. Where the tridentate quality comes in I do not see just now, but I fancy the early radical leaves are so formed at the blunt ends.

**Pœonia Witmanniana.**—This is now in flower, proving itself to be one of the very earliest species. It has large creamy single flowers, the cups pretty well filled with golden stamens or anthers somewhat pink tinted. Its perfume is a valuable quality, though some might consider it a little too strong or with too much of the Valerian flavour. I fancy this desirable *Pœony* will shortly be cheaper, and nothing, one would think, can then bar its wide cultivation.

**Silene chromodonta.**—In a similar position as the above *Campanula* grows a two-year-old specimen of this rare variety, or possibly species, and yet it is but 3 inches across. Though so humble, now it is in flower it is exquisite, and the very ideal of neatness and purity and what an alpine in cultivation should be, for do we not find that many species as seen wild become so greatly changed under cultivation as to quite change our ideas of their fitness for our gardens.

**Rosa glutinosa.**—My specimen is three years old and in its second year *in situ*. I mention this because the fact of acclimatisation has always something to do with periods of flowering. I have got to make a somewhat bold statement in regard to this dwarf species, and that is, that it is by far the earliest *Rose* to flower of all with which I have had any experience, which (the experience) has mainly been with species. The flowers open this morning must be quite a fortnight earlier than those of *R. rugosa* in the same garden. The flowers are the size of a half-crown, bright rosy carmine, and powerfully scented in the way of the old *Damascus* or the true *attar Rose*. The name is a very good one (*Sieb. and Sm.*). The whole of the young foliage is not only sticky, but glistens with the exudation. Stature of three-year-old plant, 18 inches. Perfectly hardy.

**Saxifraga minuta.**—This is worthy of notice, first because it is quite hardy, next because it is beautiful, and again because, for all its large genus, it is peculiarly distinct. It belongs to the

same group as *rotundifolia*, and it is especially in regard to the members of that set that the fitness of its name comes in, for otherwise it is not so minute a species as more than a score that could be mentioned. It is flowering at a stature of 5 inches, but the radical herbage sits very low. I have tested it in the past hard winter, and it has come safely through. The flowers are large, snow-white, and so full as to seem almost double in the corolla; they are laxly borne on stems beset with bright cherry-red bulbils, originating independent of flowers. These bright wart-like organs adhere a long time, and add much to the decorative value of the frail and succulent plant.

Woodville, Kirkstall.

J. Wood.

#### IN THE GARDEN IN MAY.

WHAT a wealth of interesting plants one finds in the hardy flower garden just at present. Amongst the various yellow-coloured kinds we have the golden Globe Flowers, or *Trollius*, including *T. europæus*, pale yellow, and its creamy white variety, though the latter does not bloom until the type has almost finished. *T. asiaticus* varies in different shades of golden yellow, and is taller than *T. europæus*. *T. asiaticus* fl. *croceo* is a deep rich orange. *T. Ledebouri* and *T. Loddigesii* appear to be forms of *asiaticus*, as is also *T. giganteus*, whilst *T. americanus* is very much like a tall form of *europæus*. *T. napellifolius* is very distinct, its rich yellow flowers rising profusely 6 inches higher than its compact tuft of pretty foliage. *T. acaulis* has deep orange, semi-double flowers, produced singly on sturdy stems only 9 inches high; the outer petals, slightly tinged with green, are toothed at the edges; this is a very distinct plant indeed. *Caltha palustris* fl. *pl.* is very bright just at present, following immediately in the wake of *C. palustris monstrosa*, which is fading as the former commences to flower. *Geum minimum*, *G. hybridum*, and *G. arcuatum* are also beautiful; the two first are different shades of orange, the latter yellow. A plant very much like a yellow *Geum* is *Sieversia elata*, which throws up quite a number of spikes bearing numerous yellow flowers. *Chrysogonum virginianum*, *Arnebia echioides*, *Ranunculus graminifolius*, *R. speciosus* fl. *pl.*, and *Hemerocallis minor* or *graminifolius* are all yellow May-flowering plants, whilst *Lithospermum hirtum* and *L. canescens* should certainly not be forgotten. These two perennial Gromwells are perfectly hardy and form tufts of deep yellow flowers. A good rock shrub is *Berberis rubricaulis*, like a dwarf form of *B. empetrifolius*, with small round yellow flowers.

Amongst Irises I find *longipetala* in bloom, with its chaste Orchid-like flowers, the standards pale blue and the falls heavily pencilled with the same colour on a white ground, with a touch of orange towards the base. *Iris cristata* is a mass of lovely blue, and a novelty is *Iris bosniaca*, which has large pale yellow flowers; this is a dwarf rhizomatous sp. and a good plant. *Iris macrospira* var. *flava* is scarcely definable, so delicate is the delicious creamy flower (with its faint crimson markings), which is borne on a stem 6 inches high, and is well worth the glass protection which shields it from the severe north-easterly gales at present prevalent. Another beautiful Iris in flower now is *I. Korolkowi violacea*.

Two beautiful fine-foliaged plants are *Rodgersia podophylla* and *Podophyllum Emodi*; the former, with its handsome, bronzy leaves, makes an excellent pot plant, and as such is very useful for decoration. The latter has dark green leaves, prettily marbled with chocolate; its milk-white flowers are just and the seed-pods are still green, but will look when ripe like an egg-shaped Cherry. *Tritoma pauciflora*, a very pretty yellow-flowering sp. with pendulous spikes, and *T. Tucki* are May-flowering. A good new plant is *Incarvillea Delavayi*, which has a spike 1 foot high with already two flowers—more to follow, of a bright rose colour, with yellow throat. The individual flower is of the same shape almost and quite as large as that of a *Gloxinia*, but the throat is more congested. *Trillium grandiflorum* deserves all

that can be said of it. *T. erectum album* is also very pretty and distinct with its greenish white flowers, with a conspicuous black pistil. *Nymphaea Laydekeri rosea* opened its first flowers on May 16 under glass. *Cyclamen repandum* has a profusion of bright crimson flowers all through May. *Pedicularis canadensis* bears curious, Ajuga-like heads of flowers, varying in colour from pale yellow to red. *Camassia Cusickii*, with its pale glaucous foliage and grey-blue spikes (3 feet high) is very handsome. A rare plant is *Onosma Borigia*, which has pale sulphur-coloured flowers, borne on a very robust spike. *Eremurus Elwesianus*, opening its first few flowers on an already 9-foot spike, promises a great deal of beauty for some time to come, considering that the flower part of the spike is quite 3 feet long. A good dwarf Lupin is *nutkanus*, only 18 inches high. *Lithospermum prostratum*, notwithstanding the recent severe winter, has made heroic efforts to recover itself, and is now in many places a sheet of that exquisite blue which is also to be found just at present in *Gentiana verna*, *Myosotis rupicola* and, a little later, in *Gentiana bavarica*. *Arenaria montana*, or, as I believe it to be, *Arenaria grandiflora*, is showing visible signs that it is going to be as good as last season—mounds of the purest white. Some of the *Puey* tribe are also in flower. *P. Wittmanniana* has a few of its pale yellow flowers, but they have been a trifle damaged by the wind. A bed of *P. tenuifolia* is magnificent, numbers of its crimson flowers resting upon a cushion of the most finely cut and elegant foliage. *P. decora elatior* is a handsome plant, with large rosy crimson flowers and very distinct and ornamental foliage. *P. peregrina compacta* is also a very good plant. Amongst *Dodecatheons* may be found *Jelleyanum*, *integrifolium*, *Clevelandi* and *media* in variety. *D. Clevelandi* is very distinct, pushing up its pale green leaves very early, and now its spike of pretty dark centred flowers with white upturned petals tinged more or less towards the tips with rose. The varieties of *Phlox setacea* and other rock kinds, *Aquilegia coerulea*, *A. canadensis*, and *A. flabellata alba* are pretty. The last only grows 1 foot high, and has white flowers with a slight tinge of blue in them. Many mossy *Saxifrages*, *Scillas* of the *campanulata* and *pyramidalis* section, *Centaurea montana* in blue, white, sulphur, red, purple, and flesh colours are also in bloom. *Mertensia alpina* has flowers something like those of *M. sibirica*, but the habit is totally different. *Pentstemon Menziesii* that has stood out all winter is now bearing its dark blue flowers. *Silene pennsylvanica*, in habit like *S. virginica*, but dwarfer, with its pale pink flowers, is very pretty, and amongst the *Candytufts* might be mentioned a very dwarf compact-growing species called *Iberis pinnata*, which only rises a few inches above the ground and forms quite a snowy cushion.

These and many others after the severe winter we have just experienced prove conclusively that there is a great deal in hardy plants. G.

Newry.

**Narcissus culture in the Isles of Scilly** (page 356).—The total run of the ten houses at Tresco utilised for the forcing of *Narcissi* should have been given as 1500 feet instead of 15,000 feet.—S. W. F.

**Seedling Daffodils.**—Mr. J. Cornhill's note (p. 338) is of much interest as touching upon the raising from seed of double *Narcissi*. This has apparently been thought very difficult; at all events, it has been but little practised. But some double kinds, e.g., the old *Telamonius plenus*, or double yellow of gardens, commonly both yield fertile pollen and show a perfect stigma. I have myself raised and flowered seedlings, both crossed and uncrossed, from the double yellow and the double *cernuus*. The latter inherit a weak constitution, and are beautiful, but valueless. But from the old double yellow *Daffodil* I have, just as Mr. Cornhill has, some strong and handsome seedlings. My best are flowers from the double yellow fertilised by pollen of *N. poeticus ornatus*, and are practically new forms of double *N. incomparabilis*. There is probably a future of some interest and

value for double seedling *Narcissi*. I would, however, suggest to Mr. Cornhill that he is to some extent wasting time and talent in employing the Tenby *Daffodil* so largely as a seed or pollen parent. This kind may do well in his particular soil and climate, and it is true that it is most useful and pretty where it succeeds. But it has been most disappointing to a great many growers, private and professional, the plant dwindling and dying out in many soils. I could tell Mr. Cornhill of large trade growers who have either lost their stock or kept it only by frequent exchange and importation of fresh bulbs. In my own district it will not live in cultivation, keeping in fair health without increase on grass only; and I have long since ceased to use it for pollen or seed. In crossing Tenby and *cernuus*, Mr. Cornhill is marrying two feebly or uncertainly constituted parents, and the offspring, though it may be pretty in his own garden, is not likely to be of permanent value in gardens at large.—G. H. ENGLEHEART, *Andover*.

**Calochorti.**—It would be well for all lovers of flowers to see a bed of *Calochorti* at this present moment, and to become aware of the ease with which they can be grown. I have acted strictly on information which was given to me by Mr. W. Wallace at Colchester, and I can now substantiate everything he said. The great point is to give them a good long season of rest, and as you have to do with bulbs this is very easily managed by taking them out of the ground after they have blossomed and keeping them in a drawer for ten or twelve weeks. This makes all the difference in the world to them in point of success. They should have very light soil, of which leaf mould and sand are two constituent parts, and I am told (this, however, did not come from Mr. Wallace) that they do better in shallow soil than in any other, and that it ought not to exceed a depth of 7 inches or 8 inches. They need very little attention, and their bright colours, fantastic shapes and delicate markings are always much admired.—K.

#### BALSAMS.

MR. W. B. HEMSLEY mentions in a paper of his on the vitality of seeds in *Nature* that Balsam plants are credited with producing more double flowers when the seed is old. Experience has shown this not to be strictly exact. Doubtless comes chiefly from strain, and although poor culture, by somewhat starving the plants in a young state, may conduce to the production of imperfect double blooms, yet, as a rule, seed of the freshest reproduces its kind even of the most double description of flowers. Some years since I used to grow Balsam plants in very large quantities, occasionally a portion from new imported seed to obtain new colours, but generally from own-saved seed of the previous year, and always found the product to be of the finest double form. That is, I think, too, general experience; indeed, it is doubtful whether the great bulk of Balsam seed sold annually in this country and at once sown is not of the previous year's crop, and everyone must admit that we have in this way the finest double flowers on Balsams conceivable. Once such a favourite pot plant, the common double Balsam has had to give place to *Begonias*, *Gloxinias*, and other more gorgeous plants. Still few of the novelties can produce such a pleasing handsome tree-like plant as comes under good culture from the Balsam. The natural habit is pyramidal and branching, the flowers and foliage well balanced, and if branches seem too thick the smaller ones can easily be thinned. In this way in a comparatively short time with but a little or even no artificial heat and in 8-inch pots it is possible to have plants that are from 20 inches to 24 inches in height, of admirable proportions, and most beautifully flowered. Individual Balsam blooms may not be very graceful, but the plants if well grown when in full bloom are very much so. The branches are not, happily, adapted for cutting, hence these plants are usually spared that treatment which falls to the lot of so many other things. Balsams,

too, give us great variety. I once grew eighteen distinct varieties according to the colours or markings of the flowers; it is very likely there are even more now in commerce. Still, a collection of some twelve distinct varieties suffices for all ordinary purposes. The self colours are the most effective, especially white, pink, magenta, scarlet, violet, and there are some pleasing Carnation-flaked and speckled varieties too, and these have their admirers. Not many persons seem to appreciate Balsams as bedding plants, and yet well grown and upon a carpet of some neutral tints they are wonderfully pretty. I always found the best results from plants allowed to become very stout, then transplanted direct from the frame to the open ground. When first put into small pots and later turned out of these with balls of soil and roots the usual effect was to produce massive bushes of branch and foliage, but not much bloom. Balsams grown outdoors on good soil are very long bloomers, and if put out thinly on to a base of some dwarf plant, show off their individual features admirably. For this form of culture I prefer to sow seed in a cold frame or greenhouse about the first week in April, and thinly. The seedlings should be well exposed to light and air when a few inches in height, so that when planting-out time comes they may be some 6 inches high and have stout stems to resist the attacking slugs.

A. D.

## THE ROCK GARDEN.

## IX.

MAY 23.—The hot weather has been followed by cooler temperature, but, nevertheless, the number of rock plants now in bloom is very great. I will not, therefore, attempt to give anything like a complete list of the flowers which have opened last week, but will mention only the best of those I have observed. As in my previous notes, the flowers here mentioned as being in bloom are only such as have been kept out of doors all the winter, and are mostly growing in various rock gardens in different parts of this county (Devon), and although in some cases the flowers may have opened prematurely and in others a little later than their usual season, the names given will, on the whole, give a fair idea of the kinds that are blooming together, and might in the rock garden be grouped together with good effect.

## CHOICE PLANTS.

As the smallest and choicest plants deserve the most prominent positions in the rock garden, I will mention them first. The following were blooming here in Exeter during the past week: *Dianthus intermedius*, *D. alpinus*, *Androsace cylindrica*, *A. glacialis*, *Myosotis rupicola*, *Edraianthus serpyllifolius*, *Haberlea rhodopensis*, *Ranunculus Thora*. As none of these are fast growers, they may be planted closely together. The first named, *Dianthus intermedius*, is a very rare and distinct variety, somewhat resembling *D. glacialis*, but it seems more compact and free flowering. *Dianthus alpinus* is more generally known, and though by no means a rare plant, its large bright pink flowers, produced in masses on very short stems, are so beautiful, that this species will always be considered a "gem of the first water" even in the most select part of the rock garden. It is a decided lover of limestone, and the soil should receive an abundant admixture of that material. *Androsace cylindrica* is decidedly rare. It is only 2 inches or 3 inches high, and its small white flowers are produced on slender, hairy stems. The plant referred to has for the last two years occupied a narrow crevice filled with little soil, but an abundance of limestone chippings, and on the west side of a rock. Its flourishing condition in that position proves

that it is well suited. *Androsace glacialis* seldom lasts more than two or three years, but it is an exceedingly pretty plant for the select part of the rock garden. Its native home is near the glaciers, and it requires, therefore, a cool position in the rock garden on the north side of a rock, but so placed that it can receive plenty of light without the direct sunshine at noon. The flowers are white, changing to light mauve. *Myosotis rupicola* is a very dwarf kind of Forget-me-not; its flowers are close to the ground and of a deep azure-blue. It thrives well on a level position. *Edraianthus serpyllifolius* should be planted sideways in a sunny position into an upright fissure where complete drainage would be ensured. It is, perhaps, the best of all the genus, its flowers being larger and of a brighter purple-blue than those of its congeners, which are not due to bloom till later on. *Haberlea rhodopensis* resembles a *Ranunculus* and should receive similar attention, *i.e.*, planted not upright, but sideways into a shady crevice filled with moist, spongy soil. Its flowers are of a bright mauve colour and very handsome. *Ranunculus Thora* is more curious than really pretty, but it is certainly very distinct from any other *Ranunculus*. The leathery, kidney-shaped leaves are comparatively large and more conspicuous than the small yellow flowers.

## DWARF ROCK PLANTS NOW IN BLOOM.

Beautiful rock plants of every description are blooming so numerous this week, that scarcely a shade of colour can be mentioned which is not represented by dwarf plants in the rock garden, without counting plants of medium and large size adorning the rougher parts and margins of shrubberies. All the plants here mentioned are actually in bloom at the time of writing, and as colour is a matter of first importance in the artistic grouping of plants, I will enumerate them according to their colour, and add here and there such brief cultural notes as space will permit.

WHITE FLOWERS IN BLOOM.—White appears to be the prevailing colour this week, and in most rock gardens that same colour is equally predominant. *Astragalus hypoglottis albus* trails close to the ground like a miniature Vetch. *Anacyclus Pyrethrum* forms a carpet of quicker growth; it has finely-divided leaves and white composite flowers with deep yellow disc. *Armeria maritima alba* (the white Thrift) is too well known to need further description. *Erinus alpinus albus* is an excellent rock plant, specially suited for dry rocks and sloping positions. *Androsace coronopifolia* is only biennial, but frequently seeds itself. *Androsace lactea* is more compact and requires less space. *Anthemis Aizoon*, with its silvery leaves and handsome large white flowers, is one of the very best rock plants and requires a dry, sunny position. *Saxifraga capillaris* and *Saxifraga Tazetta* are very much alike; they have round, entire leaves, each about half an inch in diameter, and white flowers on stems about 6 inches high, well adapted for a moist, level spot; and the same position would suit *S. tenella* and *S. arguta*. Of the encrusted section I have mentioned many in previous notes. *Saxifraga paradoxa* and *S. intacta minor* are among the best of the new arrivals. *Papaver alpinum* is an excellent rock plant and its large flowers mix well with other colours; it frequently seeds itself and likes a sunny position. *Nocea alpina* is a small crucifer with a carpet of dark green leaves. Another pretty crucifer is *Kernera saxatilis* var. *Boissieri*, only a few inches high, and with ovate lanceolate leaves. Very handsome rock plants are also *Ranunculus Segneri*, *Achillea Clavenna*, with large silvery leaves, and the very dwarf *Arenaria tetraquetra*.

RED.—*Armeria maritima Lauchiana* and *A. maritima* (Veitch's variety) are excellent rock plants, especially the latter, which has flower-heads of the brightest crimson. In a rocky border the scarlet *Delphinium nudicaule* is conspicuous, while in a sunny spot among the rocks *Anthyllis montana* has its red flowers conspicuously contrasted by its silvery foliage, and in a half-shady corner *Cortusa Mathioli* nods its head of purplish crimson flowers. Noteworthy plants of smaller size are *Lycnis alpina* and *Lycnis pyrenaica*, both doing well in small crevices. *Papaver alpinum rubrum*, the red form of the alpine Poppy, is also very handsome.

PALE PINK.—A useful rock plant of this colour is *Asperula carpathica*, which forms spreading tufts about 6 inches high and does well among the rocks. *Alsine rubra* is somewhat similar, and will grow in very poor, stony soil. *Leiophyllum buxifolium* is a minute shrub, very compact in habit. Many pale pink varieties are also contained among the dwarf *Phloxes* still in bloom. *Geranium cinereum* and *Geranium argenteum* should be in every rock garden, especially the latter, whose compact silvery foliage shows the flowers to greater advantage. Both love a sunny place. *Antennaria dioica* also makes a silvery carpet.

YELLOW.—Yellow was most abundant among the rock plants of a few weeks ago, but this week it is not well represented, at least not among the smaller kinds of rock plants. Several plants mentioned a week or two previous are still in bloom, but among new arrivals this week I have only noticed the well-known *Cypripedium Calceolus*, which does well in stony soil, *Potentilla sabarda* and *Ranunculus speciosus*. The last has large double flowers and is more suitable for rocky borders or margins of groups for larger plants.

BLUE.—*Linum alpinum* with its large pale blue flowers is very attractive, as are also the prostrate *Veronicas* now blooming, *viz.*, *V. rupestris* and *V. alpina*. The *Globularias*, too, deserve attention, their globular heads of deep blue flowers on erect stems being very striking. The varieties now fully expanded are *G. trichosantha*, *G. vulgaris* and *G. cordifolia*. *Polemonium humile* is an excellent dwarf and compact form well suited for level spots among the rocks, and lastly I would mention that glorious alpine *Columbine*, *Aquilegia alpina*.

ORANGE.—The only orange-coloured flowers this week are *Rhodiola linifolia* and *Erigeron aurantiacus*.

MAUVE.—This colour is well represented by the many dwarf *Phloxes* still in bloom. *Geranium lancastriense* also deserves notice, its striped flowers being very attractive; and last, but not least, I would mention that charming Himalayan *Androsace*, *A. sarmentosa*, without which no rock garden is complete, and which thrives luxuriantly if planted in a sloping position, and so arranged that its rosettes of leaves rest on stones and not on the soil.

PURPLE.—*Ranunculus pyrenaica* planted sideways into an upright fissure on the shady side of the rock presents a beautiful picture. *Erinus alpinus*, on the other hand, does best in a dry, sunny position. Of dwarf plants with purplish blue flowers and suitable for massing few are better adapted than the glorious alpine *Asters*, *Aster alpinus* and its varieties, *A. a. superbus*, and *A. a. speciosus*, while for a dwarf carpet of deep purple *Calamintha alpina* is well adapted. A very choice plant is also *Polygala Chamæbuxus purpurea*, which does best in moist peat on the shady side of a rock.

## MEDIUM-SIZED PLANTS IN BLOOM.

Before closing my notes on the flowers blooming this week, I will briefly mention a few larger plants more suitable to the bolder or rougher part of the rock garden or for borders than for planting on the rocks themselves. Among those blooming now are various kinds of *Dodecatheon* (purple, mauve, lilac, and white), which do best in deep moist ground; *Geranium sanguineum*, red; *Geranium Endresi*, with large mauve flowers; *Polemonium reptans*, blue; *Geum minimum*, orange; *Geum pyrenaicum*, yellow; *Convallaria majalis rosea*, *C. m. foliis aureo-striatis*, and *Dianthus hybridus Marie Parc*, white.

Etcetera.

F. W. MEYER.

(To be continued.)

## FLOWER GARDEN NOTES.

COLOUR IN PLEASURE GROUNDS.—Those who were responsible for the laying out and planting of many pleasure grounds in bygone days made as a rule provision for a great preponderance of greenery, so that the present generation has to put up with a maximum of foliage and a minimum of flower unless they are able to cut out the one and replace with the other. This bygone style of planting is the more regrettable in the case of those pleasure grounds that are rather thickly wooded and that have a fair amount of lawns. In such cases Laurels in variety and all evergreen shrubs whose flower is unimportant should only be scantily represented. Where flowering plants were introduced in these old pleasure grounds it is generally found that they are dotted here and there as isolated specimens among banks of evergreens instead of being grouped together in fairly large clumps so that they make a bold and effective display. The result of such a style of planting where labour is somewhat scarce (and the pleasure ground is the first place to suffer) is that these solitary flowering plants are apt to be so crowded by the surrounding foliage, that they are drawn up into long weedy-looking specimens that are not easily again restored into nice bushy stuff. I had an experience of this kind with a lot of hardy Azaleas some years ago, and draw attention to the matter now, because this is a good time so soon as they are out of flower to take any such weedy plants in hand. Extra room may be made for them by clearing away common foliage on either side, then long side shoots may be brought down with strong pegs as near to the ground as they may be required, using care in the operation to avoid splitting or breaking. The operation may be repeated if possible every second year, and the result will be not only well-furnished plants, but such an extension of the same on either side as to give a greatly increased breadth of colour to brighten up the surrounding greenery.

CARNATIONS.—The border Carnations are throwing up their flower-stems, and a little support will soon be necessary if the weather should prove at all rough. Where several stems are showing (not a very common occurrence this season) I like to put a thin stake down as near the centre as possible, and after fastening the matting to the same, to draw the stems loosely together, the result being support to the flowers and the avoidance of stiff, formal tying. Heavy-flowered Pinks, as Ernest Ladhams, will also need support. The above remarks as to the avoidance of formality in staking and tying are applicable to all herbaceous plants; indeed, the less of this work that is done the better, and a great point is the encouragement in all plants of strong, vigorous growth, so as to obviate the necessity for support. A great deal naturally depends on the season. In some years one cannot do without the support—in 1894, for instance, when strong winds and heavy, driving rains had a tendency to beat down nearly every plant that had not a stake of some kind. When there is an hour to spare, it will be well to get the

soil mixed for layering Carnations, but if the plants are rather close together, and one is likely to be obliged to get about among them a great deal in order to secure the flowers, it is not advisable to put the new soil on until the flowering season is nearly over. Also if the situation is dry and the weather seems likely to prove hot and dry, it is better to put a comparatively thin layer of the new soil nearly all over the beds rather than high heaps immediately round the plants. If the stock of Pinks is to be increased, and one cannot well have too many of such fine sorts as Snowflake, Her Majesty, and E. Ladhams, a bit of soil may be prepared for the cuttings and placed in an extemporised frame. Such a frame, both in the case of Pinks and Violas, is very handy, so that one can shade in hot sunshine until rooting has commenced. I prefer the cuttings of both Pinks and Violas on a south border with a little shade if necessary rather than on a north border. The result has been far from satisfactory on the latter site given a damp, chilly, sunless time after the insertion of the cuttings.

BEDDING OUT.—Our beds and borders have been gradually so filled up with hardy plants, that what is known as bedding out has been reduced to a minimum, and the work is nearly finished. In some beds of Violas the only work necessary has been the dotting in of an occasional large plant of *Fuchsia*, or where other things have been mixed with them for a spring show, as, for instance, *Saxifraga umbrosa*, and a very charming bed this makes associated with a dark purple *Viola*: the *Saxifraga* is removed to be replaced by something else that will be likely to make a nice combination for the summer months. *Dactylis glomerata* is one of the specially good things. One or two hardy, or hardy and half-hardy combinations that were a success last year are similarly planted for the present season. One is clumps of the variegated *Digraphis* filled in with crimson *Antirrhinum*. This, it may be noted, is a mixture eminently suitable for poor soil beds, the grass under such conditions preserving its variegation in a pronounced form well through the season, and the *Antirrhinum* flowering with great profusion. Another rather pleasing contrast will be found in *Spirea palmata alba* on a groundwork of *Petunia compacta*, a dwarf striped variety that wants hardly any pegging, and that makes an admirable carpet for things of taller growth, as the white *Spirea*. *Aproros* of this family, what a difference there is in the habit of growth of different varieties. Some form large clumps quickly; others, as *astilboides*, are a long time making a clump of any size even on a cool, partially shaded border. *Petunias* rank among the best of summer bedding plants of trailing habit, and besides the *nana compacta* strain I grew last year *Giant of California* and *Carter's Blue*, which were respectively decidedly satisfactory in the positions assigned them. The free-flowering *Tropaeolums*, those that give a plentiful supply of flower on comparatively scanty foliage, are also satisfactory and seem to be increasing in favour. A very nice bed on a large scale can be formed with blocks of the small white-flowered *Marguerite* filled in with the trailing *Ball of Fire Tropaeolum*. In yellows, *Mrs. Clibran* is a capital variety, its peculiar deep orange shade being, I think, almost unique in outdoor summer-flowering plants. Another hardy bed that will presently be hard to beat and that has indeed been gay for some time is planted with alternate blocks of *Gypsophila paniculata* and *Montbretias*, the latter on a carpet of *Phlox setacea*. It is, by the way, as well to examine the *Gypsophila* early in the season before growth commences, and, if necessary, to lift healthy crowns, divide, and replant to make up for losses. Many crowns have altogether disappeared this season. The flowers of the alpine *Phloxes* will soon be over, and if an increased stock is required, cuttings may soon be inserted. I generally put them in the frame that is made up for Pinks and Violas, and they get a little shade for a time after their insertion. Poor, bare slopes might with advantage be furnished with these *Phloxes*, as they always

give a nice green carpet, and truly in the flowering season they are veritable sheets of bloom.

Claremont.

E. BURRELL.

The common Bugle.—One of the prettiest things in my garden is a mass of the common Bugle (*Ajuga reptans*). Apparently self-sown, it came up two or three years ago in an odd corner, where it interfered with nothing, and spreading over the surface of the soil forms a mass of spikes of bright blue. It shows the bronze-tinged foliage peculiar to it, and which contrasts well with the colour of the blossoms. Some would probably be inclined to spurn it as a common weed, but it is pretty enough to rank among cultivated plants.—R. D.

Viola Blue Bell.—When at Syon Gardens, Brentford, a few days ago, I found Mr. Wythes was using this variety somewhat extensively as an edging to his summer flower beds. Mr. Wythes holds that for compactness of habit, freedom and continuity of bloom, and non-liability to mildew, it is the best of the Violas for this purpose. Seeing this variety, which originated as a chance seedling, was sent out in 1873, it may be regarded as one of the oldest in cultivation, and it can be found in many gardens. I have raised a goodly number of seedlings from it, but have never exactly reproduced the variety itself, though possibly others may have succeeded in doing so. A *Viola* that can hold its own for nearly a quarter of a century must possess good qualities in the face of the many hundreds of seedlings raised within the last twenty years.—R. D.

## GARDEN FLORA.

## PLATE 1016.

## CYCLAMEN PERSICUM.

(WITH A COLOURED PLATE OF C. SALMON QUEEN.\*)

Not in every instance does the real lover of horticulture follow in the footsteps of the ardent florist as regards the beautiful. The ideal standard of the latter is more frequently than not based upon lines that cannot be accepted from the point of true beauty. It is no small wonder, therefore, that a divergence of taste ensues. As an instance, no better example can be given than that of the show *Dahlia* as contrasted with the present-day forms of the *Cactus* varieties; the latter are infinitely more attractive than the former, whilst as regards choice for use in a cut state, those of the show type have no chance with those of the *Cactus* class. With respect to the present-day race of *Cyclamen persicum* there is not this division, the improved forms being in every sense superior to the older ones. These divide themselves into two classes, but in both instances the beautiful predominates over and above any of the hard and fast lines of the florist. It is not an easy matter to say which of the two sections is more to be admired—that designated the *giganteum*, or that known as the older form—as regards growth. Both are very free-flowering, the latter being on the whole the more compact in habit, whilst again the foliage of both is beautifully marked, that of the *giganteum* type being the more imposing.

The illustration affords an instance of the advance that has been made from point of colour, the name conveying at once the best description of this. When the writer first saw the plants that were exhibited by the Messrs. Sutton and Sons, of Reading, at one of the

\* Drawn for THE GARDEN in Messrs. Sutton's nursery at Reading by Miss Low, November 12, 1894. Lithographed and printed by Guillaume Severens.

earlier meetings of the R.H.S. this past spring, the impression was at once stamped upon the mind of its thoroughly distinct colour, and its other equally good properties of free-flowering, compact habit, and beautifully marked foliage. These alone form a trio of good qualities that it would be difficult to surpass. A further opportunity was afterwards afforded of inspecting the larger quantity as growing in one of the Cyclamen houses at Reading, when the first impressions were more than confirmed. This particular shade of colour was seen to better advantage under the clearer atmosphere of Reading as contrasted with that which pervades the Drill Hall on most occasions. One other of its good qualities should be noted, viz., that of producing its flowers well above the foliage.

Salmon Queen being now placed in commerce, is within the reach of all lovers of these charming spring flowers, amongst which it will take a foremost place, being quite unique in its good properties. Other Cyclamens in great variety are grown at Reading for seed alone, the stock of which in each instance is as pure as

safely added ere they ceased to flower. This fact of extended blooming, combined with the large blossoms produced upon stout footstalks, points to this race as the very finest for supplying cut flowers. Giant Crimson, White, Cherry Red, Rose, Purple, and Crimson and White are all most distinct in their colours, it being a difficult matter to say which is the finest of these.

#### THE CULTURE

pursued at Reading does not materially differ from that in usual practice. The seed is sown in November, the pans being kept in a temperature of from 55° to 60°. Earlier sowing is advised if less heat is given. Pricking off takes place in March, when for a short time the temperature ranges as high as 76° to 80°, the spent hotbeds in frames being the next move, no rest being given. Note, however, should be made of the all-important fact that the seed is sown with the greatest possible care, each seed being treated separately at a distance apart of from 1½ inches to 2 inches. This is an item of culture of which it is difficult to make too much; it prevents the check—slight though it may be

out in a cool, shady place, to grow into size by the autumn, planting deeply and treading them firmly into the soil. If neglected during summer, the plants soon suffer. How seldom one sees the variegated-leaved variety *aucuba-folia*, one of the most charming and effective of early spring-flowering plants. It is an interesting process to raise seedlings. I have a line raised from seed of the double white, nearly all fully double, and some bearing finely-formed blossoms, smaller than those of the ordinary cultivated type.—R. D.

## THE WEEK'S WORK.

### FRUIT HOUSES.

**EARLY FIGS IN POTS.**—Fruit of pot Figs forced early will now be getting smaller, and the plants if not too large and rooted into the plunging material will do much better if removed to a cooler house. Some varieties fruit much later than others, and may now be in full bearing. These, of course, will require to be kept growing freely and the shoots stopped for the production of later fruits. For early forcing in pots the St. John's and Pingo de Mel are far ahead of older varieties and require special treatment, such as early ripening of the wood, repotting during the resting period, and standing in the open in a sunny position during the summer months. Such well-known kinds as Brown Turkey, Negro Largo, and Bourjasotte Grise are now perfecting their second crop, and will make much later growth than the white-fleshed varieties named above. Ample supplies of food and moisture should be given, and the new strong wood kept hard stopped to induce a short-jointed growth. The plants of all varieties in pots which have been forced should be mulched at this date. In the case of the earliest kinds it is well to either plunge in the border or in larger pots when the plants are being hardened off, as they soon suffer if the sun shines directly on the pots. There should be no lack of water and food also in the way of liquid manure during the summer months, it being advisable to retain the old foliage as long as possible. Plants infested with scale should be cleansed after the fruits are gathered, and care taken to preserve the leaves. If not badly attacked, thorough syringing and a fine brush will remove the pest. Large old trees that have been many years in brick borders or restricted areas should get unlimited supplies of food if swelling a second crop, and be treated as advised for smaller pot plants. It is surprising what heavy crops these plants produce annually with ample surface dressings and rich food. Pot plants will bear three crops if required to do so, but I do not advise this, as it weakens the early crop for next season. Those who intend to force hard next year would do well to get the wood well matured after the second crop, removing any fruits which show, and if the trees are movable, removing later on into the open.

**PLANTED-OUT SUCCESSION FIGS.**—These will now be finishing the first crop in many houses, and require care to keep the smaller fruits moving rapidly whilst the first crop is finishing. It is well to go over the trees early in the day and gather any ripe fruits, as syringing soon spoils them. Should there be any doubt as to ripeness, it is well to omit syringing and allow the fruits to hang a little longer. Stopping and feeding will be the chief points of culture, and if the trees have filled their allotted space and cannot be extended, the treatment may be varied. Instead of laying in the wood the large shoots may be pinched in the same way as those of pot trees, and thus abundance of fruiting spurs be obtained, removing useless spray or weak wood. Should the trees be old with any barren or naked branches, it is well to lay in a reserve of young wood, cutting out the old naked wood when the crop is cleared. Select the best formed shoots and stop hard back the lateral growths not required for extension, laying in the latter their full length. At this



A white Cyclamen.

it is possible for distinct strains to be. Of these, particular note should be made of Vulcan, which has flowers of the deepest crimson, a colour that looks very rich under artificial light. In decided contrast to the foregoing that of Butterfly should be noted; this is quite a gem among the white forms, having no rival from the points of beauty and utility; the growth is very dwarf, the foliage being only of medium size, in addition to which the flower-stems are so sturdy as to require no staking whatever. The petals of this particular variety are quite notable by their breadth, so much so as to be quite overlapping. Purple Queen is a selection from Salmon Queen, differing only in point of colour, thus possessing a better constitution than most varieties of this shade. Roseum album greatly resembles Butterfly, with the addition of a crimson base.

The giant forms are kept by themselves. An intensely vigorous growth with large flowers in the greatest profusion characterises this section. Another feature, and that an all-important one, is the length of time these remain in perfection; when seen the plants had been in bloom for three months, and another three could be

—that is occasioned by an early pricking off into pans or boxes, this being entirely avoided. When done, however, each little corm is lifted with sufficient soil and roots to keep the growth progressing, no resting period being given until the seed is harvested; after which a selection is made of the most promising corms for the second year, more to make a display and to demonstrate what may be done than anything else. Large pots are studiously avoided, the second year plants being flowered in 6-inch and 7-inch pots, those of the first year in the next smaller size. SOUTHERN.

**Double Daisies.**—These pretty spring flowering plants appear to be somewhat neglected by gardeners, though they can be made of great service in the spring garden. There are the dark and pale crimsons, several shades of pink and forms of the double white, all plants of a hardy character, easily propagated, but requiring only a little attention. There should be two periods of planting for the double Daisy—in October, when they are put out in the spring beds, and at the end of May or early in June, when they are taken up to make room for the summer occupants. Then the plants should be divided and planted

season seale makes its appearance on old trees, and should be taken in hand as soon as it shows itself, as if allowed to spread to this year's growth it is difficult to eradicate. When the pest shows on the old wood it is readily removed with a soft brush dipped in paraffin solution or methylated spirits, and syringing freely daily will keep it down. The horders will now need a rich fertiliser. Young trees are much benefited by a top dressing of bone meal if fruiting freely. Owing to a short spell of hot weather the foliage got browned in exposed houses, and will soon get red spider if not syringed freely. The colour may readily be restored and the trees kept clean by syringing with clear soot water. Varieties such as Negro Largo with gross wood and too much root-run are at times barren of fruit, and I have taken strong measures to get a second crop by cutting a trench at some distance from the trees and filling in with concrete. The trees make much shorter joints, but of course require much moisture, keeping the shoots thin. By this means a good crop of late fruits is secured.

**LATE FIGS.**—Figs grown without heat will this season be invaluable, as the majority of trees on open walls have been much injured by the severe frost and will only fruit sparingly. The trees in eases or late houses show a great quantity of fruit, and as they only produce one crop the fruits should be regulated accordingly, removing any badly placed ones and thinning where too thick. As the fruits are often at the upper portion of the trees they may be left much thicker there, to check the upward growth of the trees if much extension be not required. The best mode of culture for late trees is by extension. There is never any difficulty in having abundance of clean bearing wood on these trees under glass, and it is well to remove all naked or badly-placed branches. Young trees required to cover a good space should not be allowed to carry fruit on the branches left for extension.

**PREPARING YOUNG FIG TREES.**—I have found it well to grow a few young trees in pots yearly to take the place of old ones which are too large. As good fruiting plants may be grown in two seasons it is well to prepare a few yearly for this purpose. Plants struck very early in the year will now be in condition to be shifted into 7-inch or 8-inch pots, and should be potted firmly in strong loam, to which have been added bone meal and some old mortar rubble. Plants struck last season may now be shifted into the fruiting pots, those 10 inches or 12 inches in diameter being suitable. In thinning the growths it is well to pay more attention to those varieties which are straggling growers, keeping them to one stem and getting a symmetrical head. Grow as near the light as possible in a warm house, but do not force much, relying chiefly upon sun heat during the day.

**EARLY MELONS.**—The plants on which nearly ripe fruit is hanging should be kept moderately dry, there should be no falling off as regards heat, and more air will be necessary to obtain good flavour. On bright sunny days a constant current of air during the day with a free circulation of heat through the pipes will give ripening fruits the rich aroma so much liked. In well-heated houses it is advisable to leave air on all night when the fruit is colouring. Watering plants far advanced will now require more than ordinary care, as in mixed houses all cannot be treated alike, some varieties ripening much earlier than others. Many fruits are ruined as regards flavour by being cut before the stalk cracks and ripened on shelves. I am aware one is often obliged to do so to forward Melons, but I have never tasted a good fruit cut prematurely. The fruits colour well, but sadly lack the flavour of those ripened on the plants. The weather of late has been most trying to the Melon crop, as after a spell of brilliant sunshine we have had dull cold weather, just the reverse required, and bringing canker and cracking in its train. The plants will need more than ordinary care, and should the stems crack it is well to arrest decay as soon as noticed, using finely powdered charcoal and quicklime freely where affected. Plants swelling their

fruits will need liberal supplies of food in the way of liquid manure, or quick-acting fertilisers given at alternate waterings.

**MELONS IN FRAMES.**—Many are obliged to grow Melons in frames, and as there is no better time to plant than now, sturdy clean plants should be selected for the purpose. Very good Melons may be grown in pits or frames just cleared of other plants. The bed should be well rammed so as to have a firm base, and a small quantity of prepared soil placed in mounds for the plants, planting out when the soil is warmed through. I have found it a good plan to grow the plants on a trellis. The plants supported in this way are freer from canker, get more light, and are readily attended to. The fruits, too, are much superior to those resting on the soil. A good trellis may soon be erected with Bamboo canes, fixing these 12 inches clear of the glass, and training two plants one each way in a light. G. WYTHES.

#### KITCHEN GARDEN.

**PLANTING OUT LEEKS.**—These, where required early in the autumn, have to be sown in heat in February, and if the plants have been duly hardened off in frames they will now be ready for planting out. The best Leeks are obtained from the trench system, as not only can earthing up be better accomplished, but feeding also, the trench holding the liquid manure so that the roots get the whole benefit of it. Take out trenches similar to those prepared for Celery, but somewhat shallower, digging into the bottom a good allowance of rotten manure. Pig manure is the best for Leeks, and after firming it somewhat and watering if necessary, plant the following day. Separate the young plants with great care, as the tender, succulent roots are easily damaged. Make holes from 9 inches to 1 foot, plant deeply, allowing the tops (which should be slightly shortened) to descend a little below the ground level. Cover the roots and finally water again with a fine rose. The plants will then take care of themselves until well above the ground again and in active growth, when good supplies of liquid may be given, or, failing this, a good fertiliser sprinkled in the trench during showery weather, or if dry, watered home. Leeks in open-air beds must have every encouragement to grow ahead. If the plot intended for this main crop is not yet ready, lose no time in preparing it. When planting takes place it is a good plan, where there is a great demand for this vegetable, to select the smallest roots for planting on a well-prepared plot rather thickly and in the ordinary manner. These will be found very useful for soups and other odd purposes during winter. In planting take care that no soil is allowed to drop into the hearts of the plants.

**ROOTS.**—In some districts which have been favoured with genial rains, thinning in this department will not only have become general, but comparatively easy. Even where no rain has fallen the work must be commenced, or crowding and consequent weakness must follow. Onions may be raised with the aid of a pointed stick, and thus prevented from snapping asunder beneath the ground. On very hard, baked soils watering with a rose the day previous to thinning is a capital plan. Where the dreaded Onion maggot is likely to be troublesome, thin at first in moderation, as often this pest will attack the bulbs when of considerable size, and if thinned very freely at the start the crop by their attacks is greatly reduced. Bear in mind the importance of using the Dutch hoe and of frequent sprinklings of soot and guano in showery weather. The final thinnings of Beet may now be made, except in the case of the latest sowings, and where, as is sometimes the case, blinks have occurred in the rows, they may be made up in ten days' time by transplanting. Leave one row thicker at present from which to secure those for transplanting; raise them carefully by the aid of a pointed stick or label, and plant with a dibber, or if time can be spared, draw out a trench, moisten it well, and plant the next day, firming the soil well with the feet. I have often practised transplanting Beet, and found it answer well.

**SMALL SEEDS.**—These are often neglected in dry soils after sowing; consequently they fail to germinate properly, the seedsman being blamed for poor results. It is a good plan when the seed bed is in a sunny position to cover it with mats or bags, first watering it thoroughly, which will suffice until the seeds come through the ground, when the coverings must be removed. Watering several times weekly will be necessary, and early thinning when the first pair of rough leaves have formed. The neglect of these details is often the forerunner of bolting in the autumn and of inferior crops generally. After this date thin sowings of Lettuces and all small-seeded subjects are best, as there is not much fear of failure provided a reasonable amount of care is taken.

**FRENCH BEANS.**—Some time ago I advised all who had the convenience to sow a good batch of Canadian Wonder in 9-inch or 10-inch pots, placing the same in any light position, not necessarily on shelves, in a cool house, using good rich material and feeding liberally as soon as growth was a few inches high. Good tall, stout branches will also be needed to support growth, and as soon as the Beans come into bloom, apply a good mulch of farmyard manure to the surface of the pots. This treatment, coupled with a constant supply of fresh air, will produce astonishing crops of this Bean, and, provided the foliage is kept free from spider by rigorous syringings twice daily, it is surprising how long they will continue in a bearing state. I have for years grown a good batch of Canadian Wonder in pots as described, and find them most serviceable, coming in just before the frame-planted ones, which are treated quite coolly. These latter may now be also mulched, as growth will be advanced, but the nights having turned much cooler, protection must still be given, nothing being so detrimental to the well-being of French Beans as cold, dry winds. Where those have been brought on in small pots and planted on warm borders, the screens of Yew or Spruce boughs must not yet be removed. Where Scarlet Runners sown in the open are now through the surface, the same method of protection must be adopted. Thinning must also be carried out where too thick. To those that were transplanted and have grown 6 inches high, a little soil may be drawn. A free dusting of lime and soot or wood ashes should be given at the same time. Staking may also be done before there is any fear of the Beans falling about, but where staked too early the deficiency of light causes a weakly growth. Some place a row of sticks on each side of the line, but I do not care for the plan, preferring a single row of very tall ones, so as to allow the sun and light to play on all parts of the foliage and bloom-trusses. After the uprights have been inserted in the soil, cross rails must be placed horizontally along them, to which each must be secured.

J. CRAWFORD.

#### ORCHIDS.

##### ORCHIDS AT MR. WM. BULL'S.

ORCHIDS are manifestly so much more popular than they were a few years ago, that it is not surprising to find such an exhibition as that in Mr. Bull's nursery in the King's Road, Chelsea, visited by thousands during the summer months. For several years past Mr. Bull has shown by a superb display of Orchids how charming and valuable the flower in its many forms is for decoration, especially as plants arranged with Ferns and Palms. This year visitors will find a more beautiful show than has yet taken place. The large house with its glass mirrors at the ends reflecting the thousands of flowers never looked more brilliant, Cattleyas and *Laelia purpurata* in particular creating a splendid colour picture, whilst in another house 400 spikes of *Odontoglossums* can



be seen either in full beauty or approaching that stage.

The arrangement of the Orchids is delightful. One sees careful contrasts of colour, and how greatly species differ from each other in form and shade. A mass of *Miltonia vexillaria* arrests attention at the entrance, this Orchid varying greatly. On the one hand we get a variety named *albescens*, the flower of immense size and almost pure white, whilst hard by is *rubra superba*, a neat flower, small, but rich rose in colour, quite the opposite of the other in size and colour. A variety of *M. Roezli* named *splendens* is very handsome, the flower much larger than usual and white, with a dark blotch at the base of the segments.

One of the chief features of the exhibition this year is *Laelia purpurata*. The splendid spikes of finely-coloured varieties stand out conspicuously from the mass of other Orchids. They are superb for strength and beauty of colouring, some receiving distinctive names such as they well deserve. *Atro-purpurea* is one of the most beautiful, the sepals and petals white, with a deep crimson-purple lip in strong contrast. *Fulgens* is very different from this; it has quite rosy purple sepals and petals, with a splendidly coloured lip, deep yellow in the throat. *Picta* has white segments, the lip crimson-purple in the upper part, white in front, set off by a lemon-coloured throat—a very charming and distinct kind. *Refulgens* was exceptionally fine, the lip being large, well shaped and of a self crimson-purple. *Bella* is another handsome variety, with white sepals and petals and a pretty rose-coloured lip; whilst in a form called *marginata* we get a thin white margin to a lip remarkable for its intense colour, the sepals and petals of a rose-purple shade. *Victoria* is a lovely kind, with pure white sepals and petals and a deep crimson-purple lip in very rich contrast. Many others we could mention, but our aim is not to create a string of names, rather to indicate a few of the gems in this collection.

The Orchid lover will note also another splendid feature—*Cattleya Mossiæ*, *C. Mendeli* and their respective varieties. *C. Mossiæ* was distributed in groups on the stages, thus breaking up the arrangement satisfactorily, one getting at the same time a rich mass of colour. *Lawrenceana* we made note of as a fine variety, the segments very broad and the lip with a fine white edge. Nor must we forget such varieties of *C. Mendeli* as *Empress*, rich in colour and beautiful in form, or *Rex*, with white sepals and petals and purple-rose lip. A lovely Orchid is *C. Schroderæ aurantiaca*, one of the most sweetly scented of all Orchids and charming in colour—delicate lilac, set off with a rich orange throat.

Suspended in baskets is the pendent spiked *Odontoglossum citrosum*, a species not difficult to grow, and represented by several forms. *Punctatum*, as its name suggests, is spotted, the sepals and petals cream colour spotted with lilac, the lip lilac. *Rubrum* has quite rose-coloured flowers, and in other forms colour differences exist which increase the charm of this beautiful *Odontoglot*. The clear self-yellow *Oncidium concolor*, its pendent spikes giving a rich gleam of colour overhead, and the brilliant *O. Rogersi* contribute masses of yellow to the display very different to the quiet-toned *O. pulchellum*. The *Masdevallias* are noteworthy, and one of the brightest is *M. Harryana Comet*, the flower well shaped and bright crimson in colour. *Regalis* is deep crimson and one of the handsomest of all the forms of this type.

A few other things we singled out of this choice display were as follows: *Cypripedium Mastersianum*, *C. niveum majus*, *C. grande*,

and *C. Curtisi giganteum*, all bearing remarkably fine flowers, particularly the last mentioned; also *C. barbatum*, a well-known Lady's Slipper, and which is largely represented. *Laelia elegans Schilleriana* is very pretty, the flowers deep crimson, lemon coloured in the throat. *Cymbidium Lowianum concolor* is a good variety, distinct from the well-known species in having flowers without any crimson colouring. *Trichopilia lepida* was in fine flower, also the rich brown-coloured *Phaius bicolor* and *Scuticaria Hadweni*, the flowers deep chestnut-brown, barred with yellow, the lip white and light brown. Nor must we omit to mention *Phalaenopsis Schilleriana*, *P. Stuartiana*, and the beautiful *P. Luddemanniana*, represented by a very bright and handsome form.

The *Odontoglossum* house, to which we have already referred, is a picture of blossom. The hundreds of racemes are exceedingly graceful, the majority of the plants being those of *O. crispum* (*Alexandri*) and its varieties. *O. Pescatorei*, *O. cirrhosum*, *O. Halli illustre*, deep brown and yellow, the pretty *O. radiatum*, *O. polyanthum*, *O. ornatum*, and *O. Andersonianum* were also represented in this feast of *Odontoglots*.

**Masdevallia nycterina.**—This attracted much attention at the Temple show recently, a very large specimen being placed in a conspicuous position at the corner of Baron Schroder's exhibit. The plant was growing in a large basket, and was well furnished with a quantity of erect, oblong, lanceolate leaves and a considerable number of flowers, which bang around the basket on short stems. The flowers, borne singly on the peduncle, are triangular in shape, the sepals terminating in slender tails about 2 inches long. These are of a brownish purple and yellow colour, somewhat hairy and spotted with black. The species is a native of New Grenada, where it grows at an altitude of between 5000 feet and 6000 feet, and has been in cultivation about twenty-five years. It was first known as *M. Chimera*, but was found by the late Professor Reichenbach to be quite distinct from that species and was named by him as above.—W. H. G.

**Epidendrum Stamfordianum.**—This is an exceedingly pretty species, especially when seen so well flowered as was the fine specimen shown at the Temple by Mr. White, gardener to Sir Trevor Lawrence, Bart. This plant carried upwards of a dozen and a half fine branched spikes, each supporting numerous blooms. These individually measure about 1½ inches across, the sepals and petals yellow, spotted with red. The lip is flat, white, with a bright rose spot on the crest and at the apex of the column, forming a very pretty combination. This species, although an old inhabitant of our gardens, is by no means often seen in bloom. It was originally discovered in 1837 in Guatemala by Mr. Ure-Skinner, growing on the shores of Lake Isabel. Of this species there is a very pretty variety named *E. Stamfordianum Wallacei*, which produces a somewhat shorter spike, the sepals and petals being more densely spotted with reddish purple, the creamy white lip also spotted with the same colour.—W.

**Cattleya Mossiæ.**—This very showy *Cattleya* occupied a foremost rank amongst the numerous exhibits at the recent Temple show. It is one of the most variable kinds in the genus as regards the colour of the lip, scarcely two plants being exactly alike, although each shows its characteristic markings. I am in receipt of some fine blooms from Mr. Joseph Broome, of Sunny Hill, Llandudno. Number 3 is the best formed bloom and of rich colour, the sepals and petals of a deep rosy lilac, the finely fringed lip velvety purple, and having a distinct white margin. Number 4 is a paler flower, but much larger, measuring 9 inches across the sepals, which are broad and nicely undulated; the lip large and

crisped, with a yellow throat; the ground colour very light, but prettily veined with rosy purple. The flower with no label is of good form, but smaller, having dark rose sepals and petals, with a well expanded lip, measuring 2½ inches across, nearly white, with a few pale rosy veins in the centre. It appears to me that unless there is something very distinct in the flowers of this species it is impossible to give them varietal names. There are, however, a few varieties which are very distinct, such as *C. Mossiæ Reineckiana*, a beautiful plant of which was shown at the above mentioned exhibition by Messrs. Low and Co., of Clapton. In this kind the flowers are pure white with the usual yellow disc, and beautifully veined down the centre of the lip with purplish carmine. Another chaste and lovely kind is the pure white variety named *C. Mossiæ Wageneriana*, which was also exhibited in several of the best groups. Even these plants showed great variability in the size and form of the flowers, some having scarcely any yellow in the throat, while in one plant shown by Baron Schroder the flowers were of massive size, the large lip heavily shaded down each side with golden yellow.—G.

**Masdevallia muscosa.**—This was named by Professor Reichenbach in 1875 from dried specimens brought home by Mr. Shuttleworth, who found it growing in San Domingo, in the province of Tolima, New Grenada. It is a dwarf-growing species with deep green leathery leaves, purplish beneath and about 2 inches high. The flowers are about three-quarters of an inch in diameter, with narrow, triangular-formed, pale yellow sepals, which are prolonged into tails about 1 inch in length. The lip, which is the most interesting part, is also yellow, edged in front with maroon-purple.—W.

#### MEXICAN LAELIAS.

The *Laelias* from Mexico form a very beautiful and distinct group, most of which can be recognised by the pyriform shape of the pseudobulbs. These may be generally cultivated under the same treatment as that usually advised for *Cattleyas*. First amongst the Mexican *Laelias* must be mentioned the beautiful

*L. majalis*, which is considered one of the most difficult of all Orchids to flower. This to a certain extent is quite true. In its native habitat it appears to be very free-flowering, and is known as *Mayflower*, thus indicating its natural time of blooming. At the recent exhibition in the Temple Gardens I noticed this species in bloom in several collections. The blooms of *L. majalis* are not only exceedingly beautiful, but they are also very large, measuring about 7 inches in diameter, and, considering the size of the bulbs, this is truly remarkable. This *Laelia* is an old inhabitant of our gardens, having been imported many years ago. The flowers are usually produced singly upon a peduncle, but in well-grown examples I have sometimes seen two blooms. The sepals and petals are large, the latter much broader than the former, and both of a delicate shade of pale rosy-lilac; the lip is lighter in colour, sometimes white, spotted with purple, and with a border of mauve. The plants should be well elevated above the rim of the pots or placed on blocks of wood, but they dislike being disturbed after they have become established. When, however, repotting becomes absolutely necessary it should be done with care, so as not to injure the roots. During the growing season water should be abundantly supplied, but when at rest very little is needed so long as the bulbs remain plump and healthy. The plants should be suspended near the roof and plenty of light and air admitted, with a nice moist atmosphere, very little shading being required even when the sun is very powerful.

*LAELIA ANVERS* is another fine Mexican kind, and one that is at present grown in nearly every collection. It is a most useful plant during the dull winter months, the flowers ranging in colour from pure white to rich purple. This species and its varieties also flower much better after they

have been well exposed to the sun and the growths nicely ripened. It succeeds best upon a block of wood suspended close to the glass, and thus occupies but little space. The white-flowered kinds, which are natives of the Pacific coast, require a little more warmth to grow them to perfection. The flowers of

*LELIA FURFURACEA* are also of a very lovely shade of pale rosy-purple, these individually measuring between 4 inches and 5 inches in diameter, and carried several together upon an erect peduncle. This kind was introduced about sixty years ago, and is always found growing at considerable elevations, thus showing that it requires cool treatment under cultivation.

*LELIA ALBA*, although it has smaller flowers, is a very charming kind. The blooms, white, sometimes flushed with rose, the lip having three bright yellow lines on the disc, are each about 2 inches in diameter, and carried from four to eight on long slender spikes about 18 inches in length. Of this kind there are also many varieties, the flowers of some being of a deep colour, those of others ranging from pure white to sulphur-yellow. This plant is also found at an altitude of from 7000 feet to 8000 feet, and under cultivation does best when placed upon a block and suspended near the glass.

*LELIA RUBESCENS* has flowers of similar size to those of the preceding, and is sparingly spread over Mexico and Guatemala, the blooms white or shaded rosy-lilac, with a large blotch of rich maroon at the base of the lip. It has been imported but sparingly compared with the others above mentioned, but it is a very desirable kind. It is also known as *L. peduncularis*.

*LELIA AUTUMNALIS* is also a very popular kind, which flowers in the autumn and winter months. This plant produces a spike of from five to nine blooms, each about 4 inches in diameter and of a bright rosy-purple, becoming lighter at the base of each segment. G.

#### EPIDENDRUM BICORNUTUM.

This is certainly the most beautiful *Epidendrum* in cultivation, and a remarkable Orchid in many respects. It has not been found to live long, the pseudo-bulbs usually being not so fine after a few years' growth as when first imported. Nevertheless while it lasts its distinct character always ensures it a host of admirers, and if a little care is bestowed upon it, one may reasonably expect a fair return in the way of flowers for five or six years at least. Possibly the plants while they last are happier on blocks very lightly dressed with *Sphagnum* than in any other description of compost, but as noted recently when speaking of *Phalenopsis*, even the most enduring of wood will not last long in the moist heat of a tropical Orchid house. The next best position for this Orchid is, I am confident, a deep pot filled nearly to the rim with potsherds, and a layer of living *Sphagnum* over this, the plants being placed in the hottest and most humid house at command. Newly-imported plants soon push roots in all directions among the rocks, taking hold of the sides of the pots and revelling in the moisture afforded by the superficial layer of Moss without being hampered in any way by closeness of material. A little of the best fibrous peat would no doubt cause a stronger growth for the first year or two, but it would probably be at the expense of the future health of the plant, as the very best fibre becomes soddened in course of time from the continuous watering. While growing freely the species in question is almost aquatic in its needs, constant damping and syringing overhead being necessary to keep thrips in check and to maintain growth. The Moss grows rapidly, often reaching several inches up the stems, keeping them moist at the base and tending to the full development of the hollow fusiform pseudo-bulbs. During winter the greater portion of this must be removed, as it would hold too much moisture about the plants. The plants should have the lightest position available during the winter, and while re-

quiring much less water than during the growing season, must not be actually dried either in the atmosphere or at the roots, and the temperature must never go below 60°, excepting on the coldest nights, when it is better to allow a slight drop than to give too much fire-heat. *E. bicornutum* is ascribed to *Diaerium* by Bentham, but is more generally known by the former name. Its flowers are produced on terminal scapes in spring, from eight to twelve being the usual number borne on each. The individual blossoms are frequently 2 inches in diameter, of a pure ivory white, except for a few crimson dots about the labellum. This has two rather prominent horns, from which the species takes its name. It is found growing naturally on bare rocks and tree trunks in Trinidad and various other parts of the West Indies, and was introduced in 1834. The present is its blooming season, and the flowers last in good condition from a month to six weeks. R.

#### ARRANGING CUT FLOWERS.

AFTER flowers are cut and brought into the house their beauty is often marred, and the

this to be considered in gardens of limited extent. Many of us would be greatly relieved if those who arrange cut flowers (which at some seasons of the year have been obtained at a considerable amount of labour and anxiety) would endeavour to produce a maximum effect with a minimum of material. In many gardens throughout the country there are far more flowers grown for cutting than would be really required if due economy were practised in arranging them. The growth of flowers for the supply of families during the London season is a serious matter to the gardener, who would be only too thankful if they could be made to go farther than they now do, so that he might have more room and time to devote to other subjects. This object could be easily attained in the majority of cases if those who arrange the flowers did but study the art of grouping them, selecting those which blend harmoniously together, both in form and colour, using just sufficient to give an effect and natural beauty to the whole. Not only would the flowers used last much longer, but they would also give greater satisfaction.



*Iceland Poppies in a bowl.*

charming effect which they would otherwise have produced is utterly spoilt through bad arrangement. More frequently than not the idea of most people who arrange flowers seems to be to stuff as many as they can into any given receptacle, thereby thinking to show them off to the best advantage. What a mistake they make! and that at the sacrifice of both colour and form. Again, where several vases have to be filled, how often do we find one arrangement a counterpart of the rest—a piece of this and a bit of that may be seen in each vase. These are a few of the many instances where the beauty to be seen in flowers is deteriorated through the want of due amount of consideration on the part of those who have the arrangement of them. At the present time, when cut flowers are so much in request and so varied the objects to which they are applied, it is highly essential to economise them to the utmost; especially ought

When cutting flowers, the best plan is to fix upon what is intended to be used in each given receptacle, collecting only sufficient of each kind for the purpose, and avoiding a repetition of the same arrangement from time to time as much as the supply will admit of doing. By this means the flowers can be greatly economised, leaving, in many instances, a better display in the garden during the summer and in the houses throughout the winter months. The prizes offered at various horticultural exhibitions throughout the country have no doubt aided in a great measure to bring about a better state of things in the arranging of cut flowers. Lessons such as those showing the evil results and the low position in the prize list of those exhibitors who still adhere to the antiquated system of crowding flowers together for producing effect in floral decorations may often be learnt on such occasions by all of us. Much,

however, remains still to be done. The annexed engraving shows a well-arranged bowl of Poppies.

## KITCHEN GARDEN.

### DWARF OR FRENCH BEANS.

In looking through seedsmen's catalogues of the present day it is surprising how many of the old favourites have dropped out. A few seasons ago I made a trial of various kinds to test earliness, and found the newer kinds superior. Of course, in a private garden it is impossible to grow a large number of dwarf Beans, so that only a limited selection of sorts can be made, but I have had opportunities of seeing large breadths at Chiswick, and think we have improved the qualities of this vegetable of late years, as the pods are larger, more succulent, and less stringy. This is a great gain, as many persons object to dwarf Beans after the runner Beans are plentiful, on account of their so soon getting old and flavourless. This to a great extent is the fault of the cultivator crowding the plants and not supplying food and moisture. In a note on the value of French Beans mention must be made of the new climbing variety. I consider it a valuable addition, as when the weight of crop and the space occupied are taken into consideration it is one of the most profitable Beans grown. All who are interested in vegetable culture will welcome this variety. I feel sure it will hold its own and become a standard kind. The value of dwarf kidney Beans is their free cropping and earliness. They are not coarse, like some of the newer runner varieties, which, though much larger, are less prolific than some of the older types. To get tender pods, abundance of food and moisture and plenty of room should be given.

Few crops pay better than early dwarf Beans, and those who have light sandy soil may get much earlier crops than those who have a heavy clay to deal with. I do not advise too early sowing in unsuitable soils; on the other hand, it well repays the cultivator to make his land suitable, as few crops are more appreciated than early Beans. I have in previous notes pointed out the value of starting these dwarf Beans in heat or in cold frames, and when a few inches high planting them out on a sheltered border, with protection for a time. Treated thus, few vegetables give a better return, as the pods are produced at a season they are in great demand, and the plants will bear for months if well watered, grown thinly and fed freely.

As the season for early Beans is now at hand, a few words as to culture may not be out of place. Requiring early vegetables in quantity and having an unsuitable soil, I lost no time in getting many loads of road scrapings, burning every bit of garden refuse and carting in any quantity of old mortar rubble. These compounds mixed with old leaf soil made just the material for tender root crops, or those which required quick drainage whilst the seed was germinating, many early Beans being lost by too much moisture during that period in clayey soils. Many advise sowing thickly, but it is a great evil, as the fight for existence is so severe, that the crop is poor from the start and soon over. It may be said there are such losses that thick sowing is a necessity, but such is not the case, as a few gappy rows can soon be made good by transplanting. I have found that by making three sowings, one under glass for planting out early in May, another at this season, and another a month or six weeks later, there is no lack of pods for a long season or till

cut down by frost. I am aware the two main crop sowings require much food, but if there is no lack of manure and each plant given room to develop, there will be no trouble with the crop if the pods are regularly gathered. I have gathered three crops from Canadian Wonder planted out when hard forced. For early cropping few varieties are superior to Ne Plus Ultra sown early in May in good land. It is a very fine type of dwarf Bean, of compact growth, and enormously productive. It is equally good for forcing very early, and the pods are of delicate flavour. The earliest Bean I have grown is Mohawk or Six Weeks, but it does not yield so long as some varieties. I consider this best for early outdoor crops. The well-known Syon House is always reliable and valuable for early crops. For summer or main crops, such varieties as the Negro Long pod and Canadian Wonder are the best, but they require more space, especially the latter. I prefer to give Canadian Wonder 3 feet between the rows and each plant quite 10 inches apart, as this variety if crowded is soon over. Given space and liquid manure, Canadian Wonder is a profitable variety. Such varieties as Ne Plus Ultra and Syon House require less space. Those who depend upon these Beans for summer crops should grow them in deeper drills than those for the earlier sowings, and during growth the soil between the rows should be mulched with short manure to retain moisture. This saves the water-pot, and if the plants during hot weather can be given a damping overhead in the evenings there is no lack of pods of the best quality, while freedom from red spider which soon attacks crowded plants is ensured.

G. WYTHES.

**Too many sorts of Potatoes.**—I have recently planted no less than seventy-three distinct, or at least so-called distinct, varieties. That, of course, seems to be far too many. But then, as these plantings have been made in very diverse soils and various parts of the county, and as in no case does the total number of varieties in one place exceed twenty-four, the quantity after all will not seem to be excessive. Most of the well-known ones have been included, and very many others hardly known in the county. The object of the various trials is to enable local residents interested in Potatoes to see whether there are in commerce sorts not known to them, but which may be better adapted for their soils or purposes than are those at present generally grown, and that should prove useful in the respective localities. Possibly out of the whole collection some twenty or so may be found exceptionally good.—A. D.

**Winter Lettuces.**—I find the two best Lettuces for standing the winter are Dickson's Imperial Brown Cos and Black-seeded Bath Cos. I made a small sowing of the above varieties on September 29, 1894, and transplanted when large enough to handle in rows 12 inches apart, and 9 inches from plant to plant, on a west border shaded by a wall 9 feet high. I did not lose more than eight plants, the blanks caused being immediately filled out of the seed-bed. In the middle of April I tied up almost the half of them, which caused them to blanch beautifully. I have had a good supply of nice blanched crisp Lettuce, which will continue for another fortnight or longer, since the first week in May.—F. CLIPSTONE, *Dingley Gardens, Market Harborough.*

**Parsley.**—Where second sowings which are just through the ground show signs of being patchy, another sowing may now be made. Indeed, it is always well to be on the safe side with this uncertain crop, especially in hot, dry soils. Sometimes wireworm is very troublesome, taking the young plants wholesale when well advanced. At this date I would rather select a somewhat cool situation, as, for instance, in front of espalier

fruit trees, the shade from the trees suiting the crop well, and yet admitting enough light and sun to strengthen it. When sown keep the ground well moistened until the seed germinates; this watering is best given in the evening, as then it has a better chance of acting beneficially than when applied in the early part of the day. When evaporation is rapid a little rough litter spread over the seed row helps to preserve the moisture.—C. H. N.

**Tripoli Onions bolting.**—Comparatively few beds of autumn-sown Onions stood the severe weather of February, they being so soft and tender, owing to such a mild temperature previously. Those that have a few are now troubled with wholesale bolting, this being due to the many extremes from warm to cold and from wet to dry during the present spring. The only remedy is to go over the bed and pinch out all the flower-stems low down, and to give the necks a severe twist. This treatment will often induce the bulbs to swell out to a good size; these ought always to be used first. I have this season proved the value of Trebons for autumn sowing. The bulbs here stood the winter and spring better than those of the Tripoli section, and are now growing rapidly. The finest white form of Tripoli, and one which I always grow, is Leviathan. Under good cultivation this Onion will attain to enormous dimensions, and the flavour is mild. Now is the time when winter Onions should be doing their chief work in swelling; therefore, should rain be scarce, artificial waterings must be supplied, first giving the beds a good sprinkling of a quick-acting fertiliser mixed with a little soot.—C.

## STOVE AND GREENHOUSE.

### PELARGONIUMS AT LEWISHAM.

THE Ryecroft nursery, already famous for its Chrysanthemums, will soon be noted for other flowers to which Mr. Jones has now turned his attention. Judging from the magnificent display of Pelargoniums we saw there recently, his efforts in this latter direction have met with some success, as he is now distributing several new kinds of great merit, whilst the high quality of his collection, the good culture shown, and the profuse display of bloom entitle him to a place among the most successful growers in the London district. The show and decorative races of Pelargoniums have latterly declined in popularity, which is a pity, as one would think them altogether indispensable to those who want their greenhouses and conservatories gay with bright and seasonable flowers. Certainly no flowers of the present time can compare with, much more surpass, these Pelargoniums in their lavish display of varied colour, and all this beauty is of easy attainment by those who pursue the simple, but all-essential details of culture throughout the year. The commendable feature of these newer kinds is that they possess a free and robust constitution. When these Pelargoniums were popular show flowers owing to in-breeding to maintain high quality and show form, not a few varieties were raised that sadly lacked a robustness of habit and free growth. But setting aside the conventionalities that governed the shape and colour, and seeking the natural grace and expression of the flower in varied forms and hues, there is no reason why these Pelargoniums should not again be popular, and, judging from the varieties that Mr. Jones is now growing, it will be surprising if some of them do not become valuable market plants.

Of all the varieties that have come and gone we can recall nothing resembling or at all like the variety Mr. Jones has named Eucharis.

Its flowers are of the purest white, without a spot or shade of any other colour, and quite unique in shape and disposition on the truss. They are quite round in outline, almost flat, broad in the petal, and of large size. Each flower has a stem 2 inches in length, so that the individual blossoms can be gathered singly and are adapted for a variety of uses. The truss itself is flat, having only from three to six flowers, but they are freely produced upon the plant, and the habit of growth is all that can be desired. It is a charming variety, appropriately named. The centre of attraction in the house was a kind named Mrs. H. J. Jones. The flowers of even other fine kinds looked small in comparison, whilst its colour is soft and delightful. The immense flowers form a bold truss, and all the plants were finely bloomed. In colour it is pale flesh, shading to blush-white, with two small pencilled blotches of rich crimson on the upper petals. Mrs. H. J. Jones in colour and size of bloom does not appreciably differ from some of the older kinds, but it is a marvel of profuse bloom, and useful on that account. Its flowers are rosy red, with white eye and dark blotches. Mrs. W. Wright is a lovely kind that received an award of merit last year. It is strong in growth, profuse in bloom, its flowers when first open clear soft pink, shading to pale blush and having two small feathered crimson blotches. The flowers of May Queen are of a salmon-rose colour with white throat, the nearly black blotches almost covering the upper petals. Duke of York and Lady Duff are two fine varieties of the regal type, the former bright rosy crimson and of large size, the latter a clear red sport from the variety Duke of Fife. Miss Alice Love, flesh-pink, with large dark blotches, is pretty, also Duke of Portland, which is soft rose, with white throat and dark velvet-black blotches. Multiflora, rosy pink, with crimson stains, is as free-flowering as the name implies. A few of the other kinds that are specially noteworthy are Jubilee, clear pink, with maroon blotches; Rose Bard, rosy carmine, feathered with maroon, very free-flowering; Mrs. H. M. Stanley, blue-mauve, with dark blotches; and H. M. Stanley, rosy lake, upper petals crimson, with dark spots, habit free and a profuse bloomer.

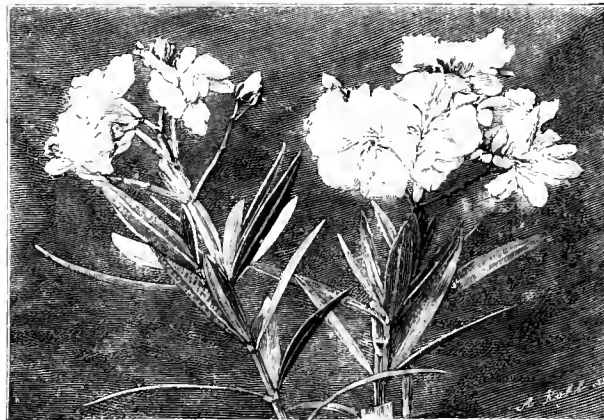
Ivy-leaved varieties are favourites with Mr. Jones, and to these as well he has made several notable additions, especially in Rycroft Surprise, a sterling kind. Its growth is vigorous, the dense flower-trusses stand up well from the plant, the individual flowers of very large size and of a lovely salmon-pink colour. Beauty of Castle Hill, with soft pink flowers and a free, dwarf habit, should be a favourite kind, whilst Rycroft Scarlet is quite the best of that shade of colour. Liberty, light rosy magenta, very free blooming; Le Prophète, cerise-red, with large flowers in a neat truss; Lamartine, light orange-red; and Jersey Beauty, of a reddish purple shade and free habit, were all noteworthy. The zonal varieties are all well done, and although nothing new was in bloom at the time of our visit, we saw good batches of seedlings that will soon be in flower.

**Reidia glaucescens.**—This is the name under which the plant mentioned above is most commonly met with, though it is now regarded as a *Phyllanthus*, whose specific name is *pallidifolius*. It is a plant of easy culture and very graceful habit, the little glaucous leaves being arranged regularly along the branches, which are disposed almost horizontally, thus giving them the appearance of long pinnate leaves. The tiny drooping blossoms are borne in sufficient numbers to form quite a feature of the plant. It has been recom-

mended as a table plant, for which its light graceful style of growth eminently fits it, but at night, especially where exposed to changes of temperature, it goes to sleep, and its value for such a purpose is thus destroyed. Other species of *Phyllanthus* are very pretty and well worth growing, notably *P. nivosus*, whose leaves are arranged in the regular frond-like manner of the preceding. In this the foliage is green, mottled more or less freely with white, and a pretty loose-growing bush it makes; or, owing to the open style of growth, it may be used for furnishing a pillar or rather in the stove. *P. atro-purpureus* is a good deal in the same way, but with purple foliage. *P. Chantrieri*, more after the manner of the *Reidia*, is a larger-growing species. All of the above are of easy propagation and culture, but they need the temperature of a stove for their full development.—H. P.

#### NERIUMS.

THE better-known name, perhaps, under which this genus is cultivated is that of the Oleander. This is, however, only the specific and not the generic name. One does not meet with this at one time popular plant nearly so often as it deserves to be. Of its beauty there can be no question when well managed. Failures to



A double-flowered *Nerium*.

flower it successfully have no doubt caused it to be less grown than formerly. It is a plant that delights in an abundance of light; hence a sunny position should be given it. This not only tends to develop and solidify the current season's growth, but it also acts favourably in bringing the flowers to perfection. It is not difficult to induce a *Nerium Oleander* to show flower-spikes, but these often, from want of sunshine and warmth, do not open, rarely getting beyond the partially developed bud stage. Want of water during growth will tend to the same end. This may even take place without the plant actually suffering, but a sickly hue will pervade the foliage in this case; whereas if grown in a shady house the foliage may be of a dark green tint, yet no flowers will be produced. In this respect it is somewhat analogous to *Adiantum cuneatum*, which, if grown in heat, moisture and shade, produces fine healthy-looking fronds, which will not stand the test when cut. The *Nerium* if grown in a light house will develop foliage of smaller size, paler green in colour, but perfectly healthy, the wood being short-jointed. Such wood as this will the following season be almost sure to result in plenty of flowers before the young growth becomes too sappy to deprive the flower trusses of their share of

sustenance. The spikes are terminal, three woody shoots usually issuing from their base. If these are seen to be pushing away too freely it is better to stop them and rely upon back breaks. During growth an abundance of water should be given, with an occasional stimulant to pot-bound plants. Peat and loam make about the best compost, solid potting being practised; too rich a soil will tend to a woody rather than a free flowering growth. Cuttings may be easily struck in a little warmth by placing the shoots in bottles of water in a shady and moist place. Scale is oftentimes troublesome, but the usual remedies for it suffice. Towards the autumn a warm position outside will aid in ripening the wood for another season.

Some few years back I remember to have seen several distinct forms (of Continental origin, I think) at the Royal Horticultural Society's Gardens, Chiswick. These at the time struck me as being a useful type of plant for conservatories, being particularly dwarf and profuse in flowering. It is not, perhaps, generally known that there are two white varieties, one single (*Sœur Agnes*), another double (*album plenum*). Other good forms are *cupreatum*, the copper-coloured variety; *Felix Bourguet*, very free, saffron and rose; *Madonna grandiflorum*, creamy white, double, extra fine; *Professor Duchartre*, rosy purple, double; and *Double Rose*. GROWER.

**New Fuchsias.**—On p. 330 "H. P." complains that the new Fuchsias "sent out within the last few years have been principally remarkable for the size of their flowers. In common with many other subjects, the production of huge blooms seems to be the one object aimed at by the raisers." This is a somewhat sweeping assertion, and "H. P." being a careful writer has, no doubt, grounds for what he states. But I think he can scarcely be acquainted with the varieties raised during the last ten years by that well-known grower, Mr. James Lye, Clyffe Hall, Market Lavington, Wilts. The distinguishing features of Mr. Lye's new varieties are their free, yet compact growth, forming naturally symmetrical bushes and their marvellous freedom of blooming, the blossoms generally medium-sized. Their profusion of bloom is their leading characteristic, and I can say as a frequent judge that I find Lye's Charming, which I take as representative of his own raising, almost invariably forming one of six, four, or two plants, and it is often shown as a single specimen. I write this much in justice to a painstaking and successful raiser and cultivator who has done so much for the improvement of the Fuchsia.—R. D.

**Lilium longiflorum variegatum.**—When *Lilium longiflorum* and its several varieties are grown together the difference in their foliage, which is most marked when they are from 6 inches to 1 foot high, is very noticeable, some running up comparatively spare of leaves, while in others they are numerous, much longer than those of the taller forms, and reflexed in such a manner as to form a very graceful and symmetrical-shaped specimen. Among the bulbs imported from Japan a variety in which the leaves are edged with yellow occasionally crops up, but its ornamental features are not of a very high order. The reverse, however, holds good with regard to the variety *album marginatum*, whose leaves, which are somewhat more glaucous than those of the common kind, have a regular and clearly defined margin of white. I was recently very much struck with a few beautiful examples of this which

had been brought on in a greenhouse, and were about 1 foot high and much the same in diameter. They were perfect little specimens which would be sure to attract attention. These particular bulbs crapped up in a box of the ordinary *L. longiflorum* as imported from Japan.—H. P.

## ROSE GARDEN.

### AMONG THE ROSES IN MAY.

BAD as was the outlook among Roses after the frost broke, they are certainly looking much better now than many of us expected. Serious blanks are evident in almost all gardens, and young plants seem to stand better than those with old bark and which one might almost expect to be proof against frost. Caterpillars and grubs are appearing in great numbers upon my plants, and I have therefore had several turns at hand-picking. Nothing destroys these pests so well as careful and periodical hand-picking for a short time. A few days ago I noted that the Gooseberries were attacked with those small caterpillars so prevalent upon this fruit in some seasons. I syringed them with a fairly strong dose of insecticide and found it very deadly. Having a little of the solution left over, it was used upon a wall of Roses where the Rose grub was thicker than usual, and here also it answered its purpose admirably. As a rule, it is somewhat wasteful to syringe for this pest in the open. Roses that escaped the frost are not breaking with anything like their usual vigour, and this applies more particularly to the Hybrid Perpetuals. The Tea-scented and Noisette sections certainly possess greater powers of recuperation after serious checks or injury, and are now presenting a far more promising appearance than the Hybrid Perpetuals. The hardiest climbers of this section have proved to be *L'Idéal*, W. Allen Richardson and Kaiserin Friedrich. Mrs. Paul has stood well, but it is not breaking so strongly as I expected. A peculiar feature I have noted is the success with hedge Briers planted previous to the frost and the loss sustained among those budded. One might reasonably have expected that the rooted and longer-exposed stocks would have withstood the trial best, but it does not prove to be the case. The new forms of *R. rugosa* from France stood it well. I had them just before the severe weather set in, and planted them at once. They had a severe test, and turn out equally hardy with the well-known older forms. I note that several people have complained of Crimson Rambler being less hardy than was anticipated, but my plants have certainly come through quite as well as the majority and seem almost uninjured. When the weather looked so bad for our Roses, and in anticipation of many losses, I grafted an extra lot of the more tender varieties both from the Teas and Hybrid Perpetuals. These are now turned out of their 2½-inch pots into a prepared bed, and have a very promising appearance. I fully expect them to make nice stuff by the autumn, and shall follow up this plan in future. It is the bottom eyes of our dwarfs that we are most dependent upon, and never more so than this season. In grafted plants we usually have a dormant eye; if not, one soon pushes from around the first growth, and it is this that I am depending upon in this case. No Roses look so well as the dwarfs, and in no other form can we be so sure of permanent success. Dwarf Roses, unless the variety be very tender, will always produce shoots from the base and make a show, whereas too often our standards and half-standards are killed outright. Even when

crippled, the last-named seldom come round in so satisfactory a manner as the bulk of dwarfs.

The maidens are now demanding a large share of attention, and have certainly come on better than was expected a few weeks back. Staking, tying, and a little moulding up of earth around the base, so as to cover the junction of the stock and Rose, are very necessary. It does not need much wind to break off the tender young Rose growth, especially if accompanied by a shower, when the foliage becomes heavy. The majority of our permanent beds have now been filled in with surplus pot plants, and it is an excellent plan to keep a few of these under slight cover for such a purpose. Standards in pots have been in great demand, owing to the extra loss among these, and I would strongly recommend any growers who must grow standards to have a few in pots ready for late spring planting. Where the precaution of giving a slight shade has been attended to, Roses under glass are looking well. None of the plants will be stood in the open air for a short time yet; it is so much better to be more sure of warm weather, and so avoid the risk as would follow from an exceptionally early autumn frost upon our free-growing Teas when in the open borders.

R.

**Rose Duke of York.**—This, one of the novelties of last year, bids fair to be of an exceptionally useful character. At its home at Messrs. Wm. Paul and Son's it is practically an all-the-year-round Rose. It was shown late last autumn in pots most profusely flowered at one of the Drill Hall meetings. This spring again it made its appearance in advance of everything else, and in the best possible condition. These same plants are now (May 7) flowering and in advanced bud for the second time. This variety is, therefore, to all intents and purposes a perpetual bloomer in the true sense of the word. The growth is moderate, even for a China Rose, yet very free and vigorous, *i.e.*, without any undue excess of stout sappy shoots. I have it both in pots and planted out, believing it to be a most serviceable variety. When first it was shown, the year previously, the flowers bore some resemblance to those of *Homère*, which in some measure they still do in form, but they are several shades deeper. Duke of York is, however, a better plant for pots. When it is more plentiful, this addition to the China Roses should prove to be an excellent bedding variety.—GROWER.

**Climbing Roses.**—In the majority of cases the crop of bloom from these has now been secured, and therefore we must give some attention to the production of the most suitable growth for next season. Too often these Roses are left pretty much to chance after their beauty is over. No after care will make up for neglect now, as unless we get good wood during this period of their growth we cannot possibly have bloom of the desired kind next spring. No period is more critical than that immediately following upon the great exhaustion of heavy blooming. To check the first sucker-like shoots from the lower part of our plants is to court failure, or at the least a late and immature growth. It is very necessary to help them with liquid manure, and not to forget how necessary sufficient moisture is at this season. Let the manure water be given liberally, but not too strong. I know of nothing more annoying in Rose culture than to discover that a healthy and vigorous plant is gradually declining solely because one has been too generous with what was intended to further improve and support the growth. Cleanliness, secured by frequent syringing with soft water, is also a great aid.—R.

**Pot Roses at Messrs. Wm. Paul and Son's Waltham Cross Nurseries.**—Although this old-established firm has long ceased to enter the competitive lists, it must not for one moment be inferred that Roses in pots are not grown. The

huge specimens of former years have given place to others of more useful size, and instead of the one-sided style of training which by most exhibitors is still adhered to, we have shapely all-round bush plants of various sizes, the smaller with from ten to a dozen fine buds and blooms, and the larger with as many as five and six dozen, which promise to be of the best possible quality. It is pleasing to note this all-round style of pot Roses, with no stiff, cramped or formal mode of training. The plants are chiefly grown in two large span-roofed houses, which upon one of the warmest days of this spring struck one as being delightfully cool and comfortable compared with the outside temperature. The plants are elevated on pots at a considerable distance from the glass, but through the houses being very light and the ventilation judiciously controlled, there is no semblance of elongated growths.—GROWER.

### SLUGS.

LIKE Mr. J. Whitworth Shaw (page 334) I have an abundance of slugs, although the winter was so abnormally severe and prolonged. Fortunately, the spell of hot sunshine now experienced gives tender plant growth a chance of making some headway, otherwise the outlook in the vegetable garden would have been serious. Young Cabbage, Lettuce and Cauliflower plants, put out from sowings made under glass, disappeared as if by magic, soot and lime being absolutely useless while the rain continued daily. Some mid-season sowings of Peas shared a similar fate. Out of half a dozen long rows there is not sufficient for making two, and this in spite of daily hand-picking, which seemed the only practical remedy. Nor were slugs the only enemy I had to deal with, for I do not remember before witnessing such a number as there was, in the evening following a showery day, of large earth-worms. Mr. Shaw remarked that to all appearance it had rained slugs. I think he would say equally that there must have been a rather heavy shower of large worms, so numerous were they spread over the surface. Fresh-planted seedlings had no chance whatever against these, for there were large numbers of them to be found in the early morning, roots instead of heads uppermost, and drawn into the large worm-holes. There is no doubt that the large worm-holes were convenient hiding-places for the slugs during the day. The evils of Box edging have been only too apparent this spring, thousands of seedling plants being devoured from beds adjoining paths furnished with this as an edging. Much the best remedy I found for dealing with slugs was nitrate of soda, after the stormy weather abated. Some of this was purchased for stimulating a quick growth in the Cabbage and Asparagus crops, both being late, the former also being very patchy. The first to receive a dressing was a young plantation that had been repeatedly filled up through losses by slugs, and the utmost satisfaction was felt when in the morning large numbers were found on the surface soil quite dead. Possibly salt might have had a similar effect, but I do not think it would have been equal to the nitrate. An investment in either would have been justifiable if the destruction of such a troublesome plague could have been assured. On the score of economy and safety I found it necessary to pass the soda through a rather small-meshed sieve, so that the lumps, of which there is always such a quantity, could be pounded with a mallet. Put on in the state in which it usually comes to hand, there is a danger in small seedling plants being killed outright where the larger lumps dissolve immediately on their roots. After the experience of the past winter, there will be no future hope of slugs being destroyed by frost, no matter how severe or protracted it might be, because in my case there was but little snow to cover the ground as a protection to them, nor were they out of the reach of frost unless they penetrated to quite 2 feet or more into the soil. That they remained alive and healthy with only very slight shelter, I had unfortunately conclu-

sive evidence; boards and planks for wheeling on if upturned disclosed only too plainly that they need not burrow deeply to get beyond its influence. There is generally an idea that a severe winter destroys numbers of slugs in the garden, but such a hope must not be entertained again, for it is doubtful if ever there will be a winter affording such convincing proof as that we have had.

Ground occupied with Brussels Sprouts, winter greens and Celery trenches seems to be the favourite feeding quarters of slugs during the season. On ground just cleared of the two first named crops much the larger number of slugs has been found, and the least is on that freshly-dug, which points rather to the fact of their extermination by deep digging. Last year Parsnip and main-crop Carrot seeds were first sown on firm undug ground, but until this was dug I could get no "plant," slugs eating them off as soon or even before they had sprung up; the second sowing did very well on the same border when dug. Probably had I sown a dressing of salt or nitrate of soda with the seed in the first instance, I should have been spared the necessity of digging.

W. STRUGNELL.

## SOCIETIES AND EXHIBITIONS.

### ROYAL HORTICULTURAL SOCIETY.

TEMPLE SHOW, MAY 21, 22, AND 23.

#### Orchid Committee.

First class certificates were awarded to—

*CYPRIPEDIUM STONEI PLATYSENIUM*, of which great rarity a very finely grown plant was exhibited with two spikes of its handsome and most singular flowers, each spike bearing two magnificent blooms. The dorsal sepal is creamy white with bronzy purple lines, the lower sepal being almost equal to it in size and marking; the petals, which are one of its chief characteristics, are very broad and of great length, being very similar in colouring to the sepals, the purple shading being of the two darker; the lip is long, as in the type, white, with deep rosy tints. From Sir Trevor Lawrence's collection.

*ODONTOGLOSSUM (MILTONIA) BLEUANUM VIRGINALE*.—A most lovely form of *O. Bleuanum*, more beautiful in its extremely soft tints, whilst the flowers are nearly 5 inches in width, the colour of which is pure white with a light rosy tint at the base of the petals, and slight veins of a darker shade upon the base of the lip. This was also a finely cultivated example, having also travelled well. From Mons. Jules Hye-Leyen, Ghent.

*CATLEYA MENDELI BELLENSIS*.—A most charming and distinct form of this beautiful species, amongst which it must be classed as one of the very finest; the labellum is of great breadth and well expanded, having a heavy blotch of deep rich purple and deeply fringed; the throat has the distinctive feature of Mendeli intensified in deeper shades of orange and yellow; the sepals and petals are rosy lilac, the latter being of great width. From Baron Schröder.

Awards of merit were adjudged to—

*CATLEYA MENDELI GRANDIS*, a notable form, with flowers of unusual size, the petals being of great breadth, these and the sepals being of a soft, rosy blush shade. The lip is specially fine, with deep colouring, its breadth adding to its beauty here. The rich purple is very fine, the golden markings in the throat being also very distinct. From Messrs. H. Low and Co.

*CATLEYA MOSSIE LADY F. WIGAN*.—An extremely beautiful form, with very soft tints of colouring; the sepals and petals are pure white as in *C. Mossie-Reineckiana*, but the colouring of the lip is much lighter, the rich purple blotch giving place to veins of the same shade. The fringe, so noticeable in *C. Mossie*, is pure white; the rich yellow of the throat is most conspicuous. From Sir F. Wigan.

*CATLEYA LAWRENCEANA ATRO-RUBENS*, of which a small plant only was shown, but this was quite sufficient to stamp it as one of the finest forms of this richly-coloured species yet seen. The colour of the lip, as usually noted, has been imparted to the petals, whilst the sepals are a shade lighter. The lip itself, on the other hand, is several shades deeper, the rich, deep rose-purple being singularly unique and fine. From Mons. Jules Hye-Leyen.

*LÆLIA PURPURATA BELLA*, which in a measure takes after *L. p. Russelliana*, the lip only having a shading and slight veins of purple, the latter of a darker shade. The sepals and petals, also the ground colour of the lip, are of the purest white, being also fully up to the usual size of the species. From Messrs. W. L. Lewis and Co., Southgate.

*ODONTOGLOSSUM PISCATOREI LA PERFECTIO*, which is quite a gem amongst *Odontogloss*, with the usual, but larger spots and blotches of this species of a rich shade of rosy purple, the colouring of the labellum at the same time being darker still. It is a very finely-marked form, with the flowers also of extra size. From M. Vuylsteke, Belgium.

*ODONTOGLOSSUM WILCKEANUM VAR. LOWI*.—A very light-coloured form of this species, the sepals and petals being of a pale primrose shade, the sepals spotted with dark oak-coloured spots and barred also with the same shade; the spike was a fine one, although the plant was not itself large. From Messrs. H. Low and Co.

*MASDEVALLIA HARRYANA MINIATA*.—A singularly fine form of this beautiful species, its large flowers being very conspicuous in their rich shades of colour, which is an intensely deep scarlet, with a suspicion even of vermilion. This form stood out as a most distinct variety amongst the number of other *Masdevallias* shown by Sir Trevor Lawrence.

*MASDEVALLIA SHUTTRYANA (M. Shuttleworthi × M. Harryana)*.—A most pleasing hybrid of comparatively dwarf growth; the colour is a rich orange-red, with a suffusion of golden yellow, the tail-like appendages indicative of *M. caudata*, of which *M. Shuttleworthi* is a form, being bright yellow. Also from Sir Trevor Lawrence.

Botanical certificates were awarded to—

*VANDA CONCOLOR*, a rather dull-coloured species having cinnamon-coloured sepals and petals; this appears to be a form of the old *V. Roxburghi*; and *Brassia Keeleana tristis*, with singular-looking flowers, the sepals and petals being of a shade between green and brown and the lip white. Both from Messrs. B. S. Williams and Son.

#### Floral Committee.

First-class certificates were awarded to the following:—

*DRAECENA GODSEFFIANA*.—A distinct species of tall growth, with cane-like shoots and oval leaves of a dark green colour, blotched and spotted with pale yellow. From Messrs. Sander and Co., St. Albans.

*INCARVILLEA DELAVAYI*.—A fine new hardy plant from China, with large bright rose-coloured flowers, in shape like those of a *Martynia*, and borne several in a cluster at the top of an erect stem 9 inches high. Shown by Sir Trevor Lawrence.

Awards of merit were granted to the following:—

*CALADIUM LORD DERBY*.—The leaves of this are of medium size, of a rosy red shade, the veins and edges conspicuously delineated in deep green. Shown by Messrs. J. Veitch and Sons.

*CALADIUM HENRY IRVING*.—A pretty variety, the centres of the leaves silver-grey, with broad green margin, the veins of a rosy shade. This also came from Messrs. J. Veitch and Sons.

*CALADIUM ROSE LAING*.—This is a tall-growing kind, with immense leaves of distinct colour, chiefly greenish white, but prettily suffused with pink about the centre. Shown by Messrs. J. Peed and Sons.

*PHYLLOCTYUS EXCELLENT*.—This charming kind has large, broad-petalled flowers of a brilliant

orange-scarlet colour, with crimson edging to the petals. From Messrs. J. Veitch and Sons.

*PÆONY LORD IVEAGH*.—A fine Tree *Pæony*, with large semi-double flowers of a rich cerise-red colour. Shown by Messrs. Kelway and Sons, Langport.

*GLOXINIA PRINCE OF WALES*.—A large flowered, brilliant self variety, with flowers of a deep crimson colour. From Messrs. H. Cannell and Sons, Swanley.

*CLEMATIS DUCHESS OF YORK*.—This is another of the *C. coccinea* hybrids, and a charming kind of a soft blush colour with a deeper band of pink down the centre of the petals, which vary in number from four to six in each flower. Shown by Messrs. G. Jackman and Sons, Woking.

*BEGONIA SAMUEL POPE*.—A double-flowered kind of a creamy hue, the petals edged with bright rose. Shown by Mr. T. S. Ware, Tottenham.

*BEGONIA WHITE CAMELLIA*.—A pure white double-flowered kind, aptly named after the flower it much resembles. This also came from Mr. Ware.

*BEGONIA REX, MASTERPIECE*.—A dwarf-growing kind with numerous small rounded leaves of a dull red shade, the stalks and leaf veins bright red, the edges of the leaves dark green spotted with red. Shown by Messrs. F. Sander and Co.

*BEGONIA LADY ANNESLEY*.—This has a beautiful leaf, with a bluish tinge about the centre and a broad zone of silver-grey, margined with light grey-green. From Messrs. F. Sander and Co.

*PELARGONIUM DUCHESS OF YORK*.—This is a pretty tricolor variety, the leaves grey-green in the centre, with a bright zone of soft clear red margined with yellow. Shown by Mr. J. Prewett, Hammersmith.

*SIETHORPIA AUREA VARIEGATA*.—A variety with leaves of a pale yellowish green colour in pretty contrast to the silver variegated form shown with it. From Messrs. J. Backhouse and Sons, York.

#### Fruit and Vegetables.

Messrs. Rivers and Son, Sawbridgeworth, had a group of twenty-five very fine pot Nectarines laden with fruit, each tree having from twenty to thirty fruits of splendid quality and grandly coloured. The varieties were the new Early Rivers and Cardinal. Early Rivers is noted for its earliness and good qualities, either forced or in the open. Cardinal is distinct, the fruit being more blotched; this is a fine variety for indoor culture. Some large baskets of Cardinal were also staged with a tree of Lord Napier to show the early fruiting qualities of the Cardinal. Messrs. Bunyard and Co., Maidstone, sent sixty-five dishes of Apples. The collection was nicely staged, being backed by pot trees of St. John's Fig laden with fruit and alternate plants of *Spiræa confusa*. Some of the larger Apples were remarkable for their colour and firm appearance. Calville Rouge, a bronzy red fruit; Wagener, a new kind; Belle Pontoise, Beauty of Kent, Alfriston, King of Tompkins Co., Reinette du Canada, Duke of York, High Canons, Winter Peach, Striped Beaufin, Tibbett's Pearmain, Landsberger Reinette (very fine), Newton Wonder, Allen's Everlasting and Brownlee's and Egremond Russets were the finest.

Mr. Wythes, Syon House, Brentford, staged a dozen dishes of fruit, including Amsden June Peach, a good seedling Melon, and four fruits of Beauty of Syon Melon. A new departure, which it is hoped will not be followed at future shows, was to cut the Melons, spoiling their appearance and rendering them valueless to the exhibitor. This was done by the judges. Surely it is unnecessary to cut Melons in a collection of fruit not for competition. Grapes in three varieties, Sir J. Paxton Strawberries, Brown Turkey, Negro Largo and Bourjassotte Grise Figs, and Lord Napier Nectarines completed a very good exhibit. Mr. McIndoe, Guisboro, Darlington, Yorks, sent some eight dishes of fruit, including a grand dish of Lord Napier Nectarine, Dryden and Early Rivers Nectarines, Bellegarde Peach, Best of All and Premier Melons, a dish of Lemons

and Tomatoes. Mr. J. Friend, Rooksnest, Godstone, staged six bunches of Black Hamburg and Foster's Seedling Grapes, the bunches good and berries well coloured. Mr. Osman, Ottershaw Park, Chertsey, also sent Black Hamburg Grapes, large and well coloured. Mr. Featherby, Gillingham, Kent, sent a very good collection of fruit and vegetables, having well-coloured Hamburg Grapes, Hale's Early Peach, Covent Garden Cucumber, and Ne Plus Ultra Bean. Mr. Messenger, The Gardens, Woolverstone Park, Ipswich, sent a nice collection of fruit, including good Melons, Brown Turkey Figs, and Hamburg Grapes. Mr. R. Johnson, Stand Hall, Manchester, staged six bunches of Grapes, but not quite ripe. Mr. Miller, Ruxley Lodge, Esber, sent a collection of seedling Melons of nice size, mostly green-fleshed, and of good quality. Mr. Gilman, Ingestre Gardens, Stafford, sent a white seedling Melon named Early May, but not at its best. Mr. Farr, Spring Grove Gardens, Isleworth, sent a green-fleshed Melon named Beauty of Patsbuhl.

The vegetables call for special notice, the Messrs. Sutton, Reading, staging a great quantity of Peas in pots and Tomatoes. Rarely have such grand examples of vegetables in pots been shown. The Peas were equal to those grown in the open, and the Tomatoes were laden with fruit down to the soil. This collection occupied much space, and consisted of mostly new varieties. Bountiful, a round blue seeded Pea, 3 feet, was laden with pods, some fine examples being staged. Another variety, a very dwarf marrow, one mass of pods, the latter quite full, and 5 inches to 6 inches long, was the new seedling Marrowfat. This will certainly be a valuable addition to our early varieties, and is of very fine quality. This is the result of a cross between Royal Jubilee and American Wonder. Another new Pea was Sutton's A 1, a wrinkled marrow with true marrow flavour, 3 feet in height, containing seven to nine peas in a pod. Favourite was also grandly staged, the plants laden with fully grown pods. It is a true marrow, only 18 inches high, fine for forcing and pot culture. May Queen was represented by a dozen plants in 12 inch pots. This is one of Mr. Culverwell's crosses, and a fine Pea, very early, with marrow flavour, and some 2½ feet high. It is a very heavy cropper. Empress of India Pea was also shown in quantity. In size of pod it resembles Telephone, and grows from 3 feet to 4 feet high. It is a splendid variety for early sowing on warm soils. Tomatoes were staged in great numbers and in the best possible condition. A 1 Tomato was fine, fruit of great depth and in large clusters, somewhat after Ham Green. Best of All, a new variety of a deep scarlet colour, quite smooth and not at all coarse, is said to be very early. This the committee wished to be sent to Chiswick. Perfection was also staged in quantity and of good quality. Sunbeam, a yellow, oval shaped, new variety, was specially good. Tender and True, a new cross from the Peach and Perfection, was very interesting, and is specially recommended for dessert. Abundance and Dessert, two very fine types, were well staged; the latter had racemes of fruit with from ten to fifteen medium sized fruits on each. Golden Nugget still holds its own for quality. The new climbing Bean Tender and True was shown in 6 inch pots, showing its free cropping habit.

Mr. Wythes, Syon House, staged eighteen varieties of vegetables, mostly spring grown, having very good Veitch's Ashleaf, Early May and Victor Potatoes, Veitch's Model and Nantes Carrots, Early Milan Turnips, Perfection and Prelude Tomatoes, good Veitch's Model Broccoli, Golden Queen and Perfect Gem Lettuce, Asparagus, Ellam's and Veitch's Earliest of All Cabbage, Syon House and Ne Plus Ultra Beans, Victoria Spinach (spring-sown), Cucumbers, and Turnip-rooted Beet. Mr. Empson, Amphill House, Bedford, staged vegetables in quantity, with some Apples and Strawberries nicely arranged. Mr. Ward, Longford Castle Gardens, Salisbury, had a quantity of Harbinger Lettuces and First Crop Peas, large plants of Cucumbers trained to

various shaped trellises, Mammoth Asparagus, with a nice collection of Radishes in variety. Mr. R. J. Steel, Brentford, staged Rhubarb, Cucumbers, Lettuce, Beetroot, Leeks, and other small salads. Mr. G. Mount, Canterbury, sent three very nice dishes of Conference and Perfection Tomatoes. Mr. Waite, Glenhurst, Esber, sent very fine Asparagus. Mr. Trollope, Coombe Court, Reading, also sent some Asparagus.

### Tulips.

Tulips were very much to the fore. There was not a collection of cut flowers scarcely but contained Tulips of some sort. In addition there was the second exhibition of the southern section of the National Tulip Society, though all the best flowers came from the north, and there did not appear to be any indication that the flower is being much grown in the south. Still, so long as opportunity is offered for the Tulip to be shown as an exhibition flower in the south, it does not matter if the finest blooms are drawn from the north. But, judging from the scanty attendance in front of the stands even when the tents were most crowded, how very few persons appeared to be interested in them, refined and beautiful though they are!

RECTIFIED OR BROKEN TULIPS.—There were three collections of twelve rectified Tulips, that is, flowers which have passed from the sculling breeder or self state into the broken form, which is their permanent character. The best stand came from Mr. J. W. Bentley, Stakehill, Manchester, who has succeeded to the fine collection formerly grown by his uncle, the late Mr. Samuel Barlow. Mr. Thomas Haynes, Warwick, an old milland grower, was second, and Mr. C. W. Needham, Manchester, a promising young northern grower, was third. The exquisite refinement seen in the majority of these flowers contrasted strongly with the blooms shown in collections where the colour flooded too much of the ground. There were four stands of six varieties, and Mr. C. W. Needham was placed first. Mr. T. Haynes was second, and Mr. J. W. Bentley third. With three feathered Tulips, one of each class, Mr. J. W. Bentley was first, having fine blooms of bizarre General Grant, byblomen Guido, rose Comte de Vergennes. Mr. T. Haynes was again second. With three flamed Tulips Mr. T. Haynes was first, staging very fine blooms of bizarre Sir J. Paxton, byblomen King of the Universe, and rose Mrs. Lomax. The Rev. F. D. Horner, Burton-in-Lonsdale, was second.

BREEDER TULIPS.—These are seedling self-coloured Tulips which have not yet broken into their permanent character, though they may do so at any time, or it may not be for years. One could well desire that some would never do so, so beautiful are they, and it very frequently happens that the most beautiful breeders break into flowers of poor character, while those least attractive may rectify into blooms of fine quality. There are no more beautiful border Tulips than the breeders with their pure bases and brilliant colouring; by the side of them a large number of the Darwin varieties look coarse and unwieldy. The best six, two of each class, came from the Rev. F. D. Horner. Mr. J. W. Bentley was placed second. The Samuel Barlow prizes for the best pair of rectified Tulips, one feathered and one flamed, brought several collections, Mr. C. W. Needham winning the silver-gilt Flora medal with feathered byblomen Elizabeth Pegg and flamed bizarre Masterpiece. The Rev. F. D. Horner was placed second with a feathered byblomen seedling and flamed rose Mabel. The premier feathered Tulip was byblomen King of the Universe, from Mr. C. W. Needham; the premier flamed Tulip, bizarre Sir J. Paxton, shown by Mr. T. Haynes.

COLLECTIONS OF TULIPS.—Of these there were several, and they consisted of bunches of blooms placed in bottles of water. The best came from Mr. J. T. Bennett-Poë, Cheshunt, who had all the types represented by very fine blooms. Mr. J. W. Bentley was second.

### NOTES OF THE WEEK.

**Magnolia Soulangeana.**—We have received from Mr. F. W. Meyer, Exeter, a photo of a very fine plant of this Magnolia, quite a small tree and covered with flowers, growing in the gardens of Mr. G. Radford, Sidmouth.

**Two hardy Cypripediums** now flowering in the rock garden bog at Kew are *C. macranthum*, which is very fine, the flowers of a rich self rosy purple shade, the pouch large and much inflated, and *C. occidentale*, with twisted sepals and petals of a greenish brown colour, the pouch of a clear rich yellow.

**Strawberry Sensation.**—I send a few fruits of Strawberry Sensation to show what a large fruit it is. It is the largest I have ever forced, some samples weighing 1½ ozs. It is a solid fruit with fairly good flavour. The plants outside look well.—ALEXANDER TRAIL, Fulshaw Hall, Wilmslow.

**Aster alpinus superbus.**—There can be no reasonable objection to the name as regards this variety of *A. alpinus* which is now flowering at Kew. It is truly a superb form with a deep blue flower nearly or quite as large as that of *Erigeron speciosus*, and borne on a strong stem 6 inches or more in height.

**Hemerocallis Dumortieri** is a handsome Day Lily now flowering, and would make a charming companion to the paler yellow Day Lily. Its flowers are of a deep orange-yellow shade, bright and most distinct, the blooms borne boldly on a thick, erect stem. A coloured plate of this variety was given in THE GARDEN of March 26, 1887.

**Rosa spinosissima var. altaica** is a charming wild Rose now flowering abundantly at Kew. It is a native of Siberia, and although allied to the Burnet Rose, resembling it in spiny growth and tiny leaves, is more erect in habit, with very fine flowers of a creamy white colour. It is also known as *R. grandiflora* and is a most welcome early and showy kind.

**The Amethyst Hyacinth** (*H. amethystinus*) is one of the choicest flowers of the present week, welcome for its lateness when most spring bulbs are going to rest, and quite unique in its delicate shade of porcelain blue. Such gems as this are worthy of attention, and it is little that they need if planted under suitable conditions where they will be free from needless disturbance.

**Scilla pratensis.**—A group of this late-flowering species in one of the borders at Kew is noteworthy. It has tall, feathery spikes of flowers, small individually, but effective because so numerous; whilst in colour they much resemble those of the Amethyst Hyacinth. It is a native of Dalmatia and as elegant as the feathered Hyacinth, without the monstrous appearance of that flower.

**Rosa sericea.**—This is a lovely single Rose little known in gardens, but, judging from a large bush at Kew now covered with flowers, its merits only need to be made known, and, in common with many other single Roses, it will be sought for and planted. The bush is quite 8 feet high, making a handsome specimen, the arching shoots perfect wreaths of charming blossoms. The flowers are distinctly cruciform in shape, as they have only four petals about 2 inches across and of a pale cream or straw colour, passing to white.

**Camassia esculenta.**—This lovely bulbous plant ought to be popular in gardens, as it succeeds admirably under a variety of conditions, and has a prolonged flowering season. In groups among choice shrubs and left undisturbed for several years it is very handsome, and the spikes are much finer from such established groups. In Grass, too, it is happy. We noticed it this week in the wild garden at Kew flowering freely, its long spikes higher than the tall Grass, the effect especially charming in one spot where it was associated with the Star of Bethlehem, perhaps more by accident than de-

sign, but suggestive of a lovely picture on a larger scale.

**New Tea and other Roses.**—We have the pleasure to send you a box of Rose blossoms by parcel post which we trust will be safely received. The hybrid *Rugosa Mungo Park* is a cross between *General Jacquemont* and *Rosa rugosa*, and I send flowers of the last named for comparison. The other kinds enclosed are *Sylph* (Tea) and *Medea* (Tea). We have a high opinion of both these.—W. PAUL & SON.

\* \* The two Tea Roses are very charming. The hybrid is also interesting, but there is a vast difference in form and colour between such hybrids and the Teas.—ED.

**Tulipa Bouton d'Or.**—I send you five blooms of *Tulipa Bouton d'Or*, it is so good and such an old favourite in good gardens. When I was a child I then knew it as *Buttercup*. What do you think of the *Allamanda*-like gold? Is it not a beauty? and, what is more, when planted in good rich sandy soil and left, remains a "come-to-stay" plant. *Tulipa Gesneriana ixioideis* sent you last week with the black base, &c., was known fifty years since as the yellow Peacock Tulip on account of the zone being so like in colour that on the extreme tips of a peacock's tail, very green and dark.—W. B. HARTLAND, *And-Cairn, Cork*.

\* \* A fine Tulip, admirably grown.—ED.

**Absence of flowers on Ranunculij.**—The non-flowering of *Ranunculi* and *Anemones* is, I think, the consequence of the abnormally cold and wet summer of last year, which, though promoting a vigorous leaf growth, was not warm enough to ripen off the bulbs properly. Not only the above bulbs, but a great many more have not flowered well this year. Parrot Tulips have also flowered very sparsely with me, whilst last year, the result of the hot and dry weather of the glorious summer of 1893, these Tulips bloomed most abundantly. Many Irises are also very bad, and some have even died out entirely. Fortunately, the prospects are now somewhat brighter, as on the whole we have had a very genial spring, neither too cold nor too wet, and no late frosts.—C. G. VAN TUBBERGEN, JUN.

**Genista pilosa.**—In common with most of the early-flowering *Genistas* and *Cytisuses*, this species is this year blooming with extreme freedom. It is one of the dwarfest of *Genistas*, being of dense prostrate habit, and it is on that account especially useful for the rock garden and for making an undergrowth to other taller shrubs. A bed of *Caraganas* in the Leguminosae collection at Kew carpeted with this plant in full flower is now very pretty. The leaves are small and lanceolate, having the under surface covered with a closely pressed silvery down. The flowers, of a bright golden yellow, are produced in the leaf-axils of last year's growths. The species is a native of Britain, but it is not particularly common, being confined to dry, elevated tracts in the southern counties. It is, however, widely spread over the mere southern parts of Europe. It may be propagated by cuttings taken in July and August, or by seeds, which ripen in abundance most seasons.

**Cytisus purpureus.**—Nearly all the *Cytisuses* and *Genistas* have flowers that are white or yellow, or of some shade intermediate between the two, but in this species we have a distinct and welcome break. It is a shrub of dwarf, semi-prostrate habit, and just now its slender, graceful shoots are loaded with bright pinkish purple flowers. There is a variety with almost pure white flowers, and there are also others of a more or less rosy colour. The plant may be used near the front of a border, or as a kind of undergrowth to shrubs that are erect growing and do not obstruct the light too much. It can be easily increased either by seeds or cuttings, and is sometimes grafted on stocks of *Laburnum* to form standards. It is believed that the curious *Cytisus Adami*, which bears both the flowers of this species and those of the common *Laburnum* simultaneously, was originally produced in this way—one

of the very rare instances of hybridisation by grafting. *C. purpureus* was introduced a little over 100 years ago.—B.

**Rhododendron Smirnowi.**—This is one of the most remarkably distinct *Rhododendrons* introduced to this country in recent years. It is a native of the Caucasian Mountains (the Asiatic side) and has been known to botanists for about a dozen years. Some plants have lately been flowering in the arboretum nursery at Kew, and although nine years old they are as yet only 1 foot high. This dwarf habit is not, as might be expected, associated with small leaves or small flowers, some of the former being 4 inches to 5 inches long and 1½ inches wide, whilst some of the blossoms measure 2 inches to 3 inches across. The leaves are dark green above, but on the under surface are coated with a dark brown wool. Although the species has no pretensions to rivalry with the fine garden varieties now so abundant, it has several good qualities which might be taken advantage of by the hybridiser. It is perfectly hardy, and it is probable that if it were crossed with some finely coloured variety, its dwarf habit might be in a great measure retained and at the same time an infusion of brighter colour into its flowers secured. The flowers are of a rosy purple, and although large enough are somewhat loose in the truss, which is also as large as is found on any of the true wild species of *Rhododendron*.

**Exochorda grandiflora.**—One of the most beautiful white-flowered shrubs with us this spring has been a bush, some 6 feet or 7 feet high, of *Exochorda grandiflora*. It is a native of North China, whence it was introduced by Fortune, who first saw it in flower there in March, 1845. In the structure of its flowers it scarcely differs from a *Spiraea*. It was figured in the *Botanical Magazine*, t. 4795, as *S. grandiflora*. When it first ripened fruit, however, it was seen to differ sufficiently to form another genus. A coloured plate of it was published under the correct name in THE GARDEN, February 13, 1877. Although it is frequently grown as a wall shrub there is no necessity for any protection. It is quite hardy, and, provided it is planted in good rich soil, it seldom fails to flower after having once attained sufficient age and strength. Its foliage is of a rather light shade of green, the leaves being thin and quite smooth, narrow, oblong and toothed towards the apex. The flowers, produced in erect racemes, are each about 6 inches long and pure white. A single branch will sometimes have several flowering shoots produced closely together, thus giving the effect of one large snow-white inflorescence. Each flower is 1 inch across the slightly overlapping petals, making it round and full in appearance.

**Notes from Chester.**—We send a box of blooms of *Lilacs* and *Azalea mollis*, the latter from seedlings, simply arranged in order as to colour groups, and, roughly speaking, divided into reds and yellows, but the subtle gradations of tint prove the poverty of such an incomplete distinction and division. The yellows, as you will see, run through all shades of buff and straw colour to lemon and warmer tones, the reds through salmon-pink to brick-red. All are beautiful, and massed together they give broad patches of brilliant colour which cannot be surpassed, and which cannot indeed be matched by any other group of outdoor hardy flowering shrubs at this season of the year. The *Lilacs* are this year superb. Many people are unaware of the great variety there is in *Lilacs*. Years ago persons thought the ordinary *Lilac* which bloomed by the garden door, as *Walt Whitman* places it in his tender poem on the death of Lincoln, was the only type extant. But the various kinds now to be found in most collections show a splendid range. Amongst those sent you to-day, note especially *Ambroise Verschaffelt* with its bushy head of rosy pink. Contrast with this the pale lilac flowers of *Le Gaulois* and the robust vigorous shoots of *President Grevy*. *Conseiller Heyder*, *Cerulea Superba*, and *Gloire de Moulins* are all grand. With these we send a flowering spray of a beautiful silvery foliaged bush, *Eurybia*

*Gunniana*, with its simple flowers arranged so delicately and beautifully upon its perfectly symmetrical branchlets.—DICKSONS, *Chester*.

## PUBLIC GARDENS.

**Open spaces.**—The trustees of the London Parochial Charities have subscribed out of their surplus income for the year 1895 £1000 to the funds of the Metropolitan Public Gardens Association for the purpose of promoting the purchase or laying out of minor open spaces.

**Brockwell Park.**—This charming pleasure ground, opened by Lord Rosebery three years ago, is still inaccessible on the Brixton side. The delay in constructing an entrance through the Arlingford Road occasions much disappointment in the district; and a numerously-signed petition has been sent to the County Council through Mr. W. Haydon, L.C.C., asking that the proposed gate may be opened immediately after the land has been purchased. As the park is now seen at its best, it has been suggested that while the new gate is in course of construction, the inhabitants of Brixton might have access to the park by a temporary footpath.

**Metropolitan Public Gardens Association.**—On Thursday afternoon, Mr. George Matthey, F.R.S., the Prime Warden of the Worshipful Company of Goldsmiths, opened the St. Peter's Churchyard, Walworth, S.E., as a public garden. The ground has been laid out by the Metropolitan Public Gardens Association, the cost of the work having been generously defrayed by the Goldsmiths' Company. The Prime Warden, upon his arrival, was received by the Earl of Meath (chairman), Lord Teynham, and Sir William Vincent, Bart. (vice-chairman), and other members and officials of the association, together with the rector and churchwardens of St. Peter's, the members of the Burial Board and the Vestry. The Earl of Meath warmly acknowledged the handsome gift of £650 from the Goldsmiths' Company, which had been devoted to the preparation of the ground and the erection of a granite drinking fountain. He pointed out that the association had now laid out over eighty grounds, amounting to about 110 acres in extent in various parts of the metropolis at a cost of nearly £40,000. In Walworth much more is required to be done, as there were only about six acres of public open space for 116,000 inhabitants, or nearly 20,000 people to one acre of public space. The association was further engaged in endeavouring to secure another recreation ground in East Street, Walworth. Lord Meath concluded by presenting the key to the chairman, and desiring him to open the grounds.

**The weather in West Herts.**—During the past week the days have been very warm, but the nights, as a rule, rather cold for the time of year. On each of the last eight days the highest temperature in shade has exceeded 65°, and on four days 70°. The warmest day of all was the 29th, when 77 was registered. The lowest reading indicated by the exposed thermometer was 34°. Since the 21st the temperature of the soil at 2 feet deep has risen 5°, and at 1 foot deep as much as 11°. During the last four weeks only half an inch of rain has fallen, and the ground is becoming very dry. For the last two days no water at all has been through the 2½ feet of soil in either percolation gauge. *Rosa hibernica* came first into blossom in my garden on the 24th inst., which is eight days earlier than its average date of first flowering in the previous nine years, and ten days earlier than last year.—E. M., *Berkhamsted*.

**Names of plants.**—*John Morris*.—1, *Cypripedium Chamberlainianum*; 2, *C. Haynaldianum*; 3, *C. Argus*, fine form; 4, *Cattleya Mossie*.—*M. Ricardo*.—1, *Tulipa Gesneriana*; 2, *Tulipa Billietiana*.—*E. Semper*.—Yes, probably forms of *Tulipa Gesneriana*.



"This is an Art  
Which does mend Nature; change it rather; but  
THE ART ITSELF IS NATURE."—*Shakespeare.*

## ORCHIDS.

## AERIDES FIELDINGI.

THE genus to which this plant belongs is sadly neglected by Orchid growers, but possibly it is the most popular species. This is not to be wondered at, for it is a truly noble Orchid, and when in good condition is worth growing for the sake of the foliage alone, to say nothing of the handsome spikes so freely produced when its wants are understood and properly catered for. Many of the distichous-leaved Orchids do not bloom so freely as small plants, but this cannot be urged against *A. Fieldingi*, as the plants if in good health commence flowering when only a few inches in height, and each successive year grow stronger and produce larger racemes. The old system of keeping these plants in a hot dry atmosphere, reducing them almost to a state of flaccidity by entirely withholding water in winter, has, happily, become obsolete, and we now see what the plants are really capable of. Plants less than 1 foot high often carry three or four racemes each from 2 feet to 30 inches in length, and if such were more frequently exhibited in the trade groups at our principal shows, it would probably be the means of extending the culture of this section, and have the effect of lowering the surplus stock which is to be seen at many nurseries where Orchids are made a speciality. The racemes of this species are densely furnished with flowers, and owing to the graceful curve at which they are carried the plant is popularly known as the Foxbrush *Aerides*.

The culture of this plant is of the easiest, provided enough heat and moisture are at command. It may be grown in pots or baskets, either suspended or on the stage, and if there is no Orchid house it will do very well in an ordinary plant stove. The roots are very large and fleshy and must have a light and well-aerated medium, consisting of large nodules of charcoal and living Sphagnum Moss. The best time to give new compost is as soon in spring as possible, provided a brisk temperature can afterwards be maintained, so that the plants are not checked, but grow away naturally, the roots taking at once to the compost. Like the majority of this section, the roots are active, considerably in advance of the growths, and from the time the points are seen by the green tips to be moving, the water supply must be ample, and the atmosphere also plentifully charged with moisture and, if possible, ammonia. This is accomplished by damping the houses with liquid manure, strewing soot and lime in small quantities about under the stages, or in some cases by placing a little sulphate of ammonia in the evaporating troughs. Growth under these conditions will be very rapid, and small plants soon make good specimens if kept potted on. Towards the end of summer a little more air and sunlight should be afforded the plants to consolidate the growth, but no attempt at ripening, as the term is usually understood, must be made, nor must the plants be dried at the roots. When the points of the latter show, by the white portion closing over, that the season's growth is done, then the water supply must be diminished gradually, only giving enough in the winter to keep the foliage in good condition.

When repotting, if the roots are in a thriving state they will be found to have taken a very firm hold of the insides of the pots, and no attempt must be made to remove them. The pots must be broken and the old compost and loose potsherds removed piecemeal, those with roots clinging to them being replaced in the new pots. As many as convenient of the aerial roots should also be covered with the Moss. When, on the other hand, the roots are in a bad state through closeness of the compost or insufficient drainage, all decayed parts should be cut away and the plants repotted in clean potsherds, with simply a superficial layer of Moss, or they may be laid out on a moist stage, as advised for newly-imported plants, and when seen to be starting freely, potted or basketed in the usual way.

The chief insect enemies are the small brown scale, which attacks the foliage, and aphides, which nearly always make their appearance at flowering time. These are not very troublesome if taken in hand before they get numerous, and are easily kept under by the usual means. *A. Fieldingi* is a native of the Old World, being found in India and China, and I have referred to its culture somewhat in detail, as it is similar to that required for all the larger-growing members of the genus. H. R.

***Lycaste aromatica*.**—It is surprising the amount of bloom small plants of this species produce, the bulbs and foliage being literally hidden. On a moderately strong bulb I counted fourteen flower-scapes. The flowers are produced singly on these, and, as the specific name implies, they have a strong aromatic odour. They are, moreover, very long-lasting, and the plants withstand the dry temperature of living rooms much better than some Orchids. *L. aromatica* was introduced from Mexico in 1828, and, in common with all in the genus, thrives well in the cool house.

***Vanda Denisoniana*.**—This is interesting as being the only pure white *Vanda* we have. Several fine specimens of this were exhibited recently at the Temple show, all nicely in bloom. It is found growing on the Arraean Mountains at about 2000 feet altitude, and was introduced upwards of thirty years ago. There is a beautiful and distinct variety of this fine old species which, however, is still rare. In this the sepals and petals are sulphur yellow with numerous spots, the lip of a deeper shade of the same colour. This remarkable variety appeared amongst an importation introduced by Messrs. B. S. Williams, of Holloway, about ten years ago, but I am not aware of its having been brought home since.—W. H. G.

***Cypripedium caudatum*.**—*Cypripedium caudatum* is now flowering in several establishments around London, its long ribbon-like petals always making it attractive. The petals are longer in this species than in any other kind, in some instances reaching over 3 ft. in length, although, as a rule, on small plants the usual length is from 20 inches to 24 inches. The whole flower is of a yellowish colour, veined with a crimson brownish shade, and in the variety roseum the lip is heavily shaded with rose. The somewhat scarce variety Wallisi I noted with Messrs. Low and Co., of Clapton. This is similar to the type, but has rather smaller blooms, which are of an ivory white with greenish veins. The typical form is a native of the Andes of Ecuador, and enjoys strong heat and plenty of moisture under cultivation.—W. H. G.

***Oncidium Lanceanum*.**—This, although a difficult plant to grow, is certainly very beautiful when seen in bloom, and I recently noticed a fine well-flowered specimen in the collection of Sir F. Wigan, of East Sheen. This species belongs to that section of *Oncidiums* which produces no pseudo-bulbs. The leaves proceed from a stout rhizome and measure from 1 foot to 18 inches in

length and about 4 inches broad. They grow erect and are of a dull deep green colour, more or less spotted with dull purple. The erect flower-spike is produced from the base of the last leaf, and reaches a couple of feet in length. The blooms are numerous, and individually measure about 2½ inches in diameter, usually of a greenish yellow ground colour and spotted with brown. The plant above referred to was a remarkably fine dark variety, the sepals and petals being of a pretty shade of brown and spotted with brownish purple, the fine lip being of a deep clear rose. This Orchid was introduced as far back as 1834 from Dutch Guiana by the gentleman whose name it bears, and since by other collectors in British Guiana, where it is said to always inhabit the hottest and dampest places. I have had it doing fairly well when potted in a moderately sized basket, with fibrous peat and Sphagnum Moss, with plenty of drainage and suspended close to the roof of the Cattleya house.—W. H. G.

***Cœlogyne pandurata*.**—I was interested to see Mr. Knight's note on *Cœlogyne pandurata* with thirteen flowers on a spike in THE GARDEN of May 11. I have four plants of *Cœlogyne pandurata*. The largest specimen has three flower-spikes: one spike has fourteen very large blooms. Of the two other flower-spikes not quite out, one has twelve and the other eleven flowers.—W. DRIVER, Longford, Minchinhampton.

## STANHOPEAS.

WERE the flowers of Stanhopeas not so fleeting they would undoubtedly soon become very popular plants, as they are easily grown and very free blooming. The singular and grotesque-looking flowers are, moreover, just the class to appeal to Orchid fanciers, and they are also deliciously scented. About twenty species are described, all good kinds and worth growing, but those mentioned below are the most distinct and generally grown. The flower-scapes being rather short and proceeding in a downward direction, rather shallow baskets should be used, and these made open at the bottom. Wire baskets are often used, but those made from teak rods are just as suitable—in fact I have found them do better in the latter. A suitable compost will consist of equal parts of peat and loam fibre, with a liberal admixture of small crocks and charcoal, clean Sphagnum Moss being used to line the baskets and for surfacing. Some large pieces of charcoal must first be laid in the bottoms of the baskets and fixed as far apart as possible, the layer of Moss being placed over this to prevent the peat from swilling downwards. Stanhopeas thrive well suspended from the roof in the East India house, and require an abundance of water at the roots while growing, and the syringe must be used daily over the foliage to keep red spider in check. Although liking a clear light, the foliage will be injured by very bright sunshine, so that it is necessary to shade somewhat heavily at midday. Very little water is needed in winter, the Sphagnum absorbing nearly sufficient from the atmosphere to keep the plants from shrivelling. When well established in the baskets Stanhopeas flower freely, and as soon as the blossoms open the plants must be taken to a cool house and kept quite dry, when they last nearly a week, but the plants often flower three or four times in one season.

***S. BUCERHALUS*** is a well-known and handsome species. The pseudo-bulbs are dark green and the leaves broad, nearly a foot in length. The flowers are 4 inches across, with broad sepals and narrow wavy petals, bright yellow with crimson blotches. The column is white, spotted with purple; the lip is yellow, and has a pair of curved horns. It is a native of Equatorial America, having been first found by Mr. Hart-

weg growing on trees in Pocha, near Guayaquil, in 1844.

*S. DEVONIENSIS* was named in honour of the late Duke of Devonshire, in whose collection it first flowered. It is a large-flowered kind, orange-yellow in ground colour, thickly spotted and blotched with brownish crimson. The column and lip are white, the latter with a deep purple stain. A native of Peru, whence it was introduced about 1835.

*S. GRANDIFLORA* is a chaste and lovely Orchid, fairly plentiful in collections and deservedly appreciated. The flowers, pure white, with the exception of a few minute spots of red about the lip, frequently each measure 6 inches across. This is synonymous with *S. eburnea*, and is a common plant in British Guiana and Venezuela.

*S. BUONNUTA*, as the specific name implies, is remarkable in having no horns on the lip, as in the other kinds. The flowers are creamy white on the sepals and petals, lip orange-yellow at the base, paler in front. It is not often seen in collections, and is a native of the east coast of America. Introduced about 1845.

*S. INSIGNIS* is the species upon which Sir W. Hooker founded the genus in compliment to Earl Stanhope. The flowers are each 5 inches across, pale yellow, sometimes nearly white, spotted with purple. It is a native of Brazil, and first flowered in this country as long ago as 1827.

*S. OCLATA* is a variable, but beautiful kind, the flowers of different shades of yellow, usually spotted with lilac-purple. This flowers in the autumn, and is a native of Central America. Introduced in 1840.

*S. PLATYCERAS* is a native of New Grenada, whence it was introduced by Messrs. Hugh Low and Co., and flowered by the late Mr. John Day, of Tottenham, in 1867. The flowers are very large, pale yellow, with rosy lilac spots on the sepals and petals; the lip and column greenish white, marked with purple.

*S. TIGRINA* is a well-known and strikingly handsome Orchid, which has been known to cultivation more than fifty years, having been introduced by Messrs. Low and Co. from Mexico before 1839, when it was figured in the *Botanical Register*. The flowers are most peculiar in shape and variable in colour. This is usually dull yellow, more or less thickly spotted with purple. Another beautiful and graceful kind is

*S. WARDI*, the flowers golden yellow, spotted with crimson; the lip has a dark velvety purple blotch at the base. It is a native of Guatemala. Introduced in 1836. H. R.

#### SHORT NOTES.—ORCHIDS.

*Brassavola glauca* thrives well under the same treatment as the Mexican *Laelias*. It usually produces its blooms during the months of February, March and April, and the flowers last a long time in perfection. The sepals and petals are pale olive-green and the lip white.—G.

*Dendrobium Dalhousianum*.—This is one of the most stately *Dendrobiums*, and a kind that always attracts attention whenever seen in flower. The noeme carries five to nine large blooms, each upwards of 5 inches across; the flowers are nankeen-yellow, shaded and veined with rose, the concave lip having a large maroon blotch on each side near the base, fringed at the margin and somewhat hairy.

*Cattleya Skinneri alba*.—This is a charming companion to the typical form with its rosy purple flowers. A fine specimen with numerous spikes of bloom was shown by Baron Schroeder at the Temple. The flowers are quite as large as those of the type, pure white, with the exception of a small blotch of purple at the extreme base of the lip, which, however, is not noticeable as the blooms stand on the plant.—W. H. G.

*Lælio-Cattleya Hippolyte*.—This hybrid was shown lately at the Temple by several exhibitors, and under two names, some naming it as above, and others *Lælio-Cattleya Phœbe*. It appears to be a cross

between *Lælia cinnabarina* and *Cattleya Mossiæ*; the sepals and petals of a clear orange-yellow; the side lobes of the same colour, veined with carmine, whilst the front lobe is heavily blotched with velvety crimson.—W. H. G.

*Trichopilia crispa marginata*.—One of the handsomest kinds in this useful genus is the one here mentioned, and which is flowering profusely with Mr. J. Cypher, of Cheltenham. The flowers are large, the sepals and petals more or less twisted, of a deep rosy carmine colour, distinctly margined with a broad band of white. It requires a rather warmer temperature than the better-known *T. suavis*. It is known in many gardens as *T. gloxiniaeflora*.—W. H. G.

*Cypripedium Rothschildianum*.—Introduced in 1887 by Messrs. Sander and Co., of St. Albans, this remarkable and distinct *Cypripedium* has become quite a general favourite, and is now to be seen in nearly every collection. At the recent Temple show many fine pieces were staged, carrying several flowers of very bright and pleasing colours. A nice specimen with six blooms was particularly noticeable in the collection of Sir F. Wigan, of East Sheen.—W.

*Masdevallia Harryana luteo-oculata*.—This variety is very distinct, the flower being rich crimson-scarlet, with a striking large eye of bright yellow in the centre. This I recently noticed in the collection of Sir Trevor Lawrence, and also M. Harryana Mundyana, a remarkable variety with flowers of an intensely rich colour. *M. Harryana minima* is also one that stands out very conspicuously, on account of its rich vermilion shade and crimson veins.—W. G.

*Cypripedium calanthum*.—This beautiful hybrid was recently in flower in the collection of Sir Trevor Lawrence, Bart., the plant carrying nine fine blooms. It is a cross raised in Messrs. Veitch's nursery and flowered for the first time just fifteen years ago. The parents are *C. barbatum* Crossi and *C. Lowi*. It, however, has one serious disadvantage in that the leaves become spotted, these spots gradually but quickly increasing in size until the whole leaf is rotten and has to be cut away. In the specimen above referred to, however, the foliage was quite fresh and healthy.

## FLOWER GARDEN.

### PACKING BULBS.

A CORRESPONDENT from Wellington, some 400 miles to the north of this, writes to me to inquire about the proper treatment for *Narcissus cyclamineus* (1) in respect of transmission to the colony, and (2) as to the proper treatment on receiving it. He has imported bulbs from various firms and in every case has failed with them. Unfortunately, his experience so exactly coincides with my own, that I could offer no advice at first hand. I could only say that I have ordered bulbs this year from two different firms, and that with some of these, if they arrive safe, I intend to try a kind of half-bog treatment. As to the best means of transmitting bulbs like those of *cyclamineus*—which I suppose do not bear transmission so well as stronger varieties—my correspondent favours packing in cocoa-nut fibre. I daresay this would be a good medium for packing; the dry fibre would absorb any moisture thrown off in transit and so prevent decay. I have received such very critical things as *Hepaticas* in fibre, and though they arrived dust-dry and seemingly quite dead, many of them came round in time after lying dormant for eight months or so. I am bound to say, however, that a second consignment packed in a case with *Paeonies* and German *Irises*, where they must have had some moisture, came to hand in better condition and not a plant failed. My experience goes to prove that the best material for packing delicate bulbs is cotton wool. Mr. Ware packs small bulbs in this material and they arrive here in fine condition. Last year I received from Mr. Ware some score varieties of autumn *Crocus*, three bulbs of each. Each set of three was packed separately in a little paper bag in a nest of cotton wool. The

bulbs were small, like peas many of them, but with two exceptions they came out of their wrappings as firm, fresh and silky as when they went in. Varieties of *Snowdrop* in the same consignment did not fare so well; they were packed, if I remember, in hemp husks. At any rate they were carefully enough put up, but of six varieties only *plicatus* showed grass. Some were like dried fungus and went to powder in the hand. I may say that *Galanthus Elwesi* was not among the six varieties ordered. *Elwesi* and *plicatus* are the two *Snowdrops* that travel best and that thrive best in our climate. A useful lesson also in how not to pack was given in this consignment, and since I have mentioned the good points in Mr. Ware's system of packing, I may perhaps be allowed to point out where a mistake was made. Amongst other *Snowdrops* I ordered 100 of the common single and 100 of the double. Fine large bulbs of these were sent, but each 100 had been put without any packing material into a paper bag; the consequence was that one bulb infected the other because there was no absorbent of the moisture thrown off, so that when they reached me they were a mass of blue fungus with not a sound bulb amongst them. I suppose the reason for so packing the common *Snowdrops* in this way was that it would have taken up too much space to imbue them in a packing matrix of any kind, seeing that they had to be sent by post. Subsequently to this consignment I received another of *Daffodils*. Various *Corbularias* and such small varieties were again packed in cotton wool, each set in a little bag by themselves, and they all came in excellent condition. *Corbularia monophylla* had sprouted an inch or so in transit, the sprouts pushing their way through the wool, but they were not much the worse, for they have made healthy grass though they have not flowered. The other *Corbularias*, *conspicua* and *citrina*, flowered very well. Whilst dealing with this subject I might mention another instance of packing which struck me as worth noting. Some three or four years ago I received from Barr and Son some few species of *Anemone* which had been ordered on my part without any very certain hope of receiving such things in good condition. They were such varieties as *Pulsatilla*, *rivularis*, *blanda*, *apennina alba*, *memorosa* var. *Robinsoniana*, and *palmata*. Every one of these without exception reached me in a sound condition. Each species was separately done up in oiled silk (or some such air-tight material), so that there could have been no evaporation during transit. On being unwrapped from the covering the tubers, most of them a little sprouted, looked as fresh, plump, and moist as if they had been just dug out of their native wood or meadow. This, then, is apparently the way to send those stocky or tuberous roots which retain stored in them a large supply of nutritive matter, but which at the same time are impatient of being kept out of the moist ground. Now Messrs. Roozen and Son, of Haarlem, advise their colonial *clientele* (very properly and honestly, I think) of certain more or less choice things which it is difficult or impossible to send out to the Australasian colonies in good condition. The evidence of such a firm, with their enormous experience in packing for every quarter of the globe, ought to be incontrovertible and final. Yet facts are facts, and, backed by these, I venture to make my own comments on Messrs. Roozen's list, knowing that the firm will welcome all information bearing on their business. In the list of plants "giving nearly always a total loss on arrival," numbering in all eighty-four, occur such names as *Anemone memorosa* (all), *A. ranunculoides*, *Crocus*, *Galanthus*. I

have already mentioned my experience of various Anemones. As to what Messrs. Roozen say about Crocuses, I am surprised that such should be their experience; it is not mine. I should say that the cases in which consignments of Crocus go wrong are greatly the exception, and not the rule, that is, when the bulbs are well ripened, properly packed, and sent at the proper time. I once got a consignment of Crocuses myself from Messrs. Roozen. I cannot say I was very successful with them, but that was my fault, not the fault of the bulbs, which reached me in as sound a state as when they were lifted. If I had planted them at once in the open garden in somewhat light soil, I should probably not have lost a bulb, but acting on advice, I treated them otherwise, with some expense of trouble to myself, and lost them. Friends of mine who have had similar importations from this firm have saved every bulb. As regards autumn-flowering Crocus species, which I should suppose are more difficult subjects than the Dutch varieties, I have already mentioned my experience in importing them. As to Galanthus, I cannot say how such varieties as Fosteri, Parryi, Redoutei carry. I have received them only once, and though they were carefully packed, they were mere blue fungus when they reached me. But Galanthus plicatus, I should say, is a very transmittable bulb. So is Elwesi, and so are the ordinary single and double Snowdrops if they are carefully packed in some absorbent material like dry cocoa-nut fibre. Chinese Sacred Narcissus is one of the eighty-four "total loss" subjects. If the bulbs are obtained from China and then sent out here, it is quite likely that this bulb would fail. But they are plentiful enough here, imported direct from China and sold by Chinamen. No doubt alpine things like Saxifages and Gentians are not easily sent on so long a journey. I should think they could be sent out only in a Wardian case after having been thoroughly established in pots. On the other hand, such plants as the various aquatics, Calystegia, Dielytras, Ranunculus of various species, Trieyrtis, and others of the "almost total loss" list would probably travel very well if they were packed in oiled silk or some such material. Following this list of Messrs. Roozen's is another list of forty-nine species or genera of plants which "give more losses than the ordinary amount." On that list I have not much criticism to offer. Iris anglica is, I know, a very poor traveller. Lachenalias I should have expected to travel pretty well, but I have never imported them. I am a little surprised to know that Cyclamens give trouble. The only consignment I have had were of the hardy spring kinds, cum and its tribe (from Roozen), but these did very well, and this spring they have been pretty and attractive. The most interesting item to myself in Roozen's second list is "Fritillaria (various)." I should have expected the Fritillary to be in the list of "almost total loss." I do not know about the Crown Imperial section, but the various species carry very badly. F. Meleagris, the white and the chequered, and F. pyrenaica are fairly plentiful in my garden, but with the other species I have hitherto been unsuccessful. I should like to possess every Fritillary that grows, but I have come to the conclusion that these quaint flowers are not for us. All the same, I believe the bad success attending the importation of the Fritillaries is due to the "dry" system of packing. They are treated like Daffodil, Snowdrop, or Scilla bulbs, which may be completely dried off; whereas the Fritillary does not like being out of the ground even for a short period. Two or three months

of complete dryness so shrivels the tubers up as to destroy their vitality. If they were packed as Barr and Son pack the species of Anemone, in some material that would prevent too rapid evaporation, I believe Fritillaries would travel with perfect safety. It may be said that it would not pay a large and busy firm to vary its system of packing in this way to suit the requirements of various plants. But let bulb firms charge for any such extra packing. I am sure colonial buyers would be content to bear any reasonable charges of this kind. As it is, I calculate that the Fritillaries in my garden have cost me a thousand per cent. over catalogue prices.

Yet another experience in the importation of plants, this time of shrubby things. My belief is that most things of moderate size may be sent most cheaply, safely and expeditiously by parcels post. With the view of trying whether it would not be possible by this means to obtain the various species of Roses—our nurserymen can generally supply the sensation Hybrid Perpetuals, but for the most part ignore the species that have not been "improved"—I sent lately a small trial order to a home firm. The experiment was a signal failure, and for quite assignable reasons. First the grower would choose his own time of sending and not the time suggested by me. Home growers will persist in claiming to know the requirements of our season and climate better than we know them ourselves. If growers ever so far unbind themselves as to do what is requested, it is with a tone of protest, half of pity for our ignorance and half of irritation at being asked to do what they have not been accustomed to do. If they would only say, "No, thanks; your order is not good enough to make it worth our while, and you must go somewhere else," no one could have anything to object to. What they do in effect say is either "We will execute your order, but in our way, not yours," or "We will execute your order and according to your instructions, but permit us to insinuate, with as much courtesy as the delicate relations of seller and buyer permit, that you are a fool." To return to the order of Roses. As far as I remember I suggested that the proper time for packing the Roses and despatching them on their trans-equatorial trip would be the end of the English autumn or beginning of winter. It is true that growth might not have absolutely ceased by that time. There are some Roses in which growth never ceases, but most Roses have by the end of autumn laid in supplies and are ready for the winter sleep. If they are cut back sufficiently far for the requirements of the post and properly packed, they ought to do the six weeks' journey across the tropics without any fatal results. They would reach here about midsummer, and would start away growing at once without any further hesitation than a feeling of wonder that summer had come round so soon again. Despatched in November, they would reach here about Christmas or new year, a time when any stick of a Rose would grow right away and probably give an autumn bloom. Month passed after month, however, and I supposed the order had been forgotten. At length in March, when we are within measurable distance of winter, I got a letter and invoice dated February 7. The letter ran: "Here Roses go on growing and flowering until November, and some Chinas and others until Christmas; so it would never do to send them on so long a journey unripened. Now they are quite ripe and dormant, and it occurred to me that they would, sent now, reach you when your days are beginning to shorten." This is the kind of well-meant wisdom that is so exasperating to

those who order plants from home growers. As if we did not know what Roses did there in November and December! It is surely not the month of January that ripens wood in Ireland. Nor do we want to plant imported Roses when the "days are beginning to shorten and become cooler" ("beginning!" when we are within three months of the shortest day!). I only wish my Irish grower could have a little of the weather we sometimes have at midsummer, and he would find it cool enough for starting Roses. As for the invoice, it contained names to make the mouth water—Old Red Cabbage, pyrenaica, alba, and so on—the sorts of Roses one hopes to see again before one dies. When the box arrived some time after receipt of the invoice there was not a living Rose in the parcel. But though I blame the grower for not sending the Roses at the time I wished them sent, I do not blame him because the Roses were all dead on arrival. His packing was most careful, and the plants, as far as I could judge, had been good strong plants when they were put up. I have never received a consignment in which more care was shown. But for all that I believe the system of packing was a mistake. The Roses were put up on the "dry" system, firmly wrapped round with light soil and Moss and packed in a wooden box. There was too much room for evaporation. What happened was that the Roses had been baked on their journey as in a kiln, and so each plant was bone-dry. The system of packing would have been admirable for Cactuses, but some more moist way is necessary for woody things like Roses. If they had been packed moist they would probably have sprouted on the way, but they would not have been much the worse for that.

My Wellington correspondent also mentions incidentally another point about which growers on this side of the world have sometimes reason to complain. Instead of adhering to the terms of the order, certain things ordered are omitted and a double or treble quantity sent of something else. I cannot say that this has ever been my experience, but my correspondent mentions the name of a somewhat famous Daffodil grower (not English) who, in spite of remonstrance, repeated this style of treatment in a second order, and, to make matters worse, some of those sent were wrongly named. I suppose mistakes in naming are inevitable in the best regulated firms, but really such mistakes are sometimes surprising. For three years have I been nursing Narcissus tridynamus Duchess of Albany, and this year it promised a flower. Joy! expectation! daily watching of the bloom plumping. It is so large, so vigorous, really almost indelicately strong, corpulent—indeed, like a double. It bursts—it is a double! the common double yellow Telamonius plenus. I shall order Duchess of Albany again—perhaps, and in three years it may show flower—that is, seven years from the time of my first ordering the bulb.

Yesterday I received from Florida a small consignment of plants, which in its way serves to point a moral. With the exception of some half-dozen Orchids the plants were the easiest of all plants to transmit—Cactuses, namely. But really it was good to see how they came out of their swaddlings, each one as green, plump, and fresh as when it grew in Florida. Even the root fibres were white and fresh. Now, easy as Cactuses are to send, there is a wrong way of sending even these. Last year I also received a consignment from America (not from Florida), perhaps some two or three dozen varieties. They were packed in a case, and well packed, but sent first to London, thence to be shipped

hither. They must have been about three months on the way, and when they arrived the condition of some of them was shocking to see. What had been a fine plant of *Echinocactus Wislizeni* was a mass of decay, and others were just as bad. My mistake was in sending an order large enough to justify packing in a case, and I might give this "wrinkle" to those who send to the other side of the world for plants: "Let your orders be small." Yet if plant merchants would only execute orders as the Messrs. Reasoner Bros., of Florida, execute theirs, one might send an order of any size with the certainty of getting one's plants in the shortest possible time. They use somewhat long narrow boxes made of the thinnest possible wood, and therefore very light. Each box holds several plants and costs in postage 4 or 5 cents. I received five of these boxes, and the plants reached me in prime condition (probably within a month of their leaving the nursery) and exactly at the best time of the year, just as we are turning the spring equinox. The Orchids were almost as fresh as the Cactuses. Of course, this style of packing suits only such plants as are in some degree succulents.

FEBRUARY 12, 1895.—Since I wrote the above notes on various systems of packing bulbs for export I have received a letter from my Wellington friend, from which I venture to quote a passage:—

Since I wrote I have received *N. cyclamineus*—six bulbs. Four have grown, one of which has thrown up a flowering stem. They were packed in cocoa-nut fibre along with some varieties of *N. triandrus*, which had cardboard labels attached. The cardboard had become much mildewed and all near the labels were destroyed by the same thing. Fortunately, the bulbs of *N. cyclamineus* were far enough removed from the labels to escape. The labels should have been either wood or lead; the last is best. I have also had a package of herbaceous plants from M—— (principally varieties of *Lychnis*), who were instructed to pack in cocoa-nut fibre, not Sphagnum, but, like other English nurserymen, they think their own way better, and sent the plants packed in Sphagnum. The result has been almost total failure.

Yes, this is very exasperating. I think I almost prefer the treatment I receive from my own favourite London firm, to whom I sent an order for bulbs exactly eight months ago. Promptly by return of post I received an acknowledgment of my "esteemed remittance," with a civil type-written note intimating that I should hear from the firm by the next mail; and that is the last I have heard of my order. Still, I prefer that my bulb merchant should bank my "esteemed remittance" rather than send me stuff badly packed—*Lychnis* packed in Sphagnum, *per example*—or send me bulbs too late in the season. And thereby hangs a tale. On the same day, eight months ago, on which I sent the "esteemed remittance" for an order that has not yet been executed I sent another remittance for an order that has been executed, and well executed I am sure as regards the quality of the bulbs, though it came late beyond all my calculations, at a time indeed when I was some 2000 miles from home. Their interim treatment in white sand during my absence has, I am afraid, not been to their advantage. These were despatched from Ireland about November 1 (the invoice is dated October 24), and as the order was exclusively for Daffodils, it would, I think, be difficult to advance any intelligible reason why they had not been despatched a month or six weeks earlier. A. WILSON.

*Dundee, N.Z.*

**Hardy flowers.**—Judging by the number of inquiries made of the attendants at the hardy flower tables at the recent Temple show, it would seem as if the demand for various varieties was

still very great. So much the better; but whilst many have got almost everything, or at least know them pretty well, there are others who want hardy flowers for special purposes, such as for cutting to dress vases, &c., a purpose for which myriads of hardy flowers are specially fitted, but very many others are unfitted. A few selected from those in bloom in May shown at the Temple were as follows: *Thalictrum aquilegifolium*, in various shades of pale red or pink; flowers borne on tall stems and presenting roundish tufts of fine feathery petals, very light and pleasing. *Aster alpinus*, not more than 9 inches in height; flowers single, resembling those of a *Stenactis* in form and colour, a very charming thing. *Aquilegias* chiefly of the hybrid forms now so familiar, easily grown and very elegant. These seemed to attract great attention. *Achillea mongolica* has clusters of small single white flowers borne in great profusion to a height of some 2½ feet, a far prettier thing for cutting than is the double *A. ptarmica*. *Heuchera sanguinea*, now so well known, but hardly so perhaps is the beautiful deep rich red-flowered form known as *atro-sanguinea*, of which there were several fine bunches that were very effective. *Erigeron philadelphicus* has single flowers of a pretty rosy pink colour, and borne in clusters on stems 12 inches in height; these are very graceful and pleasing. The yellow-tinted *Euphorbia pilosa* gives very useful foliage for arranging with the flowers referred to. *Geum minimum* has single flowers of reddish orange, borne on stems 20 inches in height, and very pretty. The taller *Saxifrages*, such as *pyramidalis*, and even London Pride have elegant light flowers, whilst larger ones also very graceful are furnished by the perennial *Centaureas*, of which there are several colours.—A. D.

#### FLOWER GARDEN NOTES.

**COLOUR IN PLEASURE GROUNDS.**—In the notes on this subject in last week's GARDEN I omitted to mention that where large quarters of young seedling *Rhododendrons* exist, it is advisable to run through them once or twice while they are in flower to pick out any different shades of colour that are to be found. Sometimes even in very large brakes nothing fresh is obtainable, and then, again, one may go to another brake and find perhaps a dozen plants that differ considerably from the type, either much darker in colour, or almost approaching white. If some matting is taken, it can be fastened to any different shades that may be selected, and a variety in colour thereby secured either to form separate beds or for mixing with other things. Of course, the same end can be effected even more thoroughly by planting hybrids, but then the purchase of the latter where considerable quantities are required is a very expensive business. In the matter of *Azalea pontica* I should like to mention that a good stock of plants can be obtained by sowing seed in boxes or frames, and transferring to nursery beds so soon as the seedlings can be handled until the plants are sufficiently large to warrant putting them out in the open. It is rather late now for seed-sowing, but large bushes may be examined to see if any of the pods remain intact, and if this is so, a little seed may yet be sown, as young plants are always useful where there is the opportunity for planting flowering shrubs in quantity.

**MAY FLOWERS—PYRETHRUMS.**—The fine display of *Pyrethrums* at the Temple show recalls the time when the family was but scantily represented either as to quality or quantity, and now it is undoubtedly one of the best known May flowers. Although *Pyrethrums* will flower after a fashion on poor soil, they are not seen to advantage under such conditions, the foliage being weakly and the flowers of poor quality and scantily produced. Where the soil is naturally light and poor it is a good plan when planting to have a heap of partially decomposed cow manure at hand, incorporating this with the soil as the work progresses. It has a tendency to bind the soil a bit as well as to enrich it to give a little of the loamy consistency that is necessary to the successful

cultivation of this plant. A good surface mulching is also advisable at planting time, an operation, it may be added, that should always receive attention in the autumn, and not be left until the beginning of the year when growth is on the move. So soon as the first flowers are over the plants may be trimmed over a bit and receive if the weather is dry a good soaking of liquid manure; if showery, another mulching of farmyard manure will answer the purpose. This will encourage fresh growth and flowers, the latter in nothing like the profusion of spring, but yet sufficient to make the groups fairly gay. Any amount of varieties are now catalogued, but it is advisable to pick a few of the best in different shades of colour. *Aphrodite*, *Florentine*, *Leonard Kelway*, *Ormonde*, *Meton* and *Pericles* are a good half dozen.

**HEUCHERA SANGUINEA.**—The fact that this beautiful flower was also seen at the Temple show in quantity is a capital guarantee of its hardiness; it was later than usual this year, but flowered remarkably well. I have it on a very narrow border in small clumps associated with a special favourite (*Saxifraga umbrosa*) and the contrast between the spikes of the two flowers as they wave gently in the breeze is very pleasing.

**IRISES.**—The remarks made above as to the late flowering of the *Heuchera* are applicable to those Irises that commence to flower as a rule about the end of March. Instead of March flowering, however, few of them were out this year until the beginning of May, and are therefore, so far as 1895 is concerned, contemporary with the *germanica* section. All members of the *Iris* family are seen to the best advantage in a deep rather loamy soil, and once planted should not be disturbed. Given such a soil, they will last in capital condition for many years; indeed, individual clumps will go on increasing in size and in the quantity of flowers produced with each succeeding season. Like other plants of somewhat similar foliage and habit, as *Heimerocallis* and *Funkias*, they present a beautiful appearance when naturalised on grass, and in a cool, partially shaded spot very fine flowers and foliage are secured. It may be noted of this family that when using them for vase-work it is advisable if possible to put them up with their own foliage, a remark that also applies to *Paeonies*, another gorgeous May flower. Blooms of very large size, whether of peculiar shape, as the *Iris*, or globular, as the *Paeony*, look altogether out of character with tiny delicate foliage. Another point in connection with the best known families among herbaceous plants that is deservedly receiving increased attention is the advisability of planting each separate family together in considerable quantities. If large beds isolated on turf can be devoted to them, so much the better; if not, each should command at different points on the herbaceous borders sufficient space to show it off to the best advantage. A big gathering of *Pentstemons*, *Phloxes*, both early and late-flowering, and *Antirrhinums* well massed together in different varieties is immeasurably superior to a display of summer bedding plants.

**FLOWERS FOR WHITSUNTIDE.**—Since starting these notes there has been an application for flowers in great variety for church decoration for Whit Sunday, and nearly all the hardy things enumerated will come in very acceptable, white flowers being supplied—in addition to *Rhododendrons* of that shade—by *Deutzias*, *Guelder Roses* and the newer forms of *Weigelas*. The different shades of *Rhododendron ponticum* will help to furnish big masses of colour, large branches of the same being taken off to do duty as pot plants, and fine-foliage hardy and half-hardy supplied by *Bamboos*, *Cannas*, &c. As every gardener knows to his cost, greenhouse plants are practically crippled for the remainder of the season if employed in such work, and the utilisation of hardy stuff, where obtainable, is a great boon, besides producing for the brief period required an equally telling effect. The *Deutzias*, it may be noted, that are available are old forced plants that have been outside some two or three seasons, and are this year flowering very freely.

*Claremont.*

E. BURRELL.

**TUFTED PANSIES.**

THERE is a point in this appellation of these well-known hardy flowers that usually escapes notice, though often hardly criticised. It is the fact that the chief beauty of these plants lies in their tufted or clustered habits. Growers to display their varieties have taken to show flowers in spray fashion, and very pretty they look, but no method of showing them can less correctly convey what are the natural characteristics of these tufted Pansies. Even a bed full of small

beautiful all though the autumn. It is such masses as these which so fully justify the appellation now commonly given to one of the most charming of hardy flowering plants. Cuttings taken from the young shoots that break up so densely from old plants after being cut over in the summer and inserted thickly in sandy soil under a north wall or under handlights or in a frame, standing so all the winter and planted out as strong plants in May, will, if put out fairly close together, grow into very effective masses, although



*A hybrid Tobacco. Engraved for THE GARDEN from a photograph sent by Mr. L. Burbank, Santa Rosa, California.*

plants fails to show their value. Only when seen in large tufted clusters are the real charms of these flowers fully displayed. Those who want to see them at their best should plant early in the autumn and get the plants well rooted before the middle of winter. That is the way to have fine broad clumps blooming profusely in April, May and June, when usually *Violas* are seen at their best. If such clumps as these be cut over in July, have a liberal soaking of water and a top dressing of old pot soil given them, they soon get into flower again and are very

they do not show that same tufted quality that old plants exhibit. It is when grown in either of these ways that their value for ordinary border, bedding or rockwork planting is seen. Then, scores that are very pretty set up in sprays at shows are found to be of poor effect. If not of special value for such purposes, it is difficult to understand why so many of these tufted Pansies should be put into commerce. When the very best are secured, who wants the refuse even if in raisers' estimation ever so pretty? These plants have of late been receiving spe-

cial notice at Birmingham and from many diverse aspects. One thing merits especial attention. It is certain that, arising either from the introduction of more suitable varieties, or because our seasons are now less trying, tufted as well as ordinary bedding Pansies now seem to withstand southern summer weather better than formerly. I am referring to spring-planted plants, because there was a time in my experience several years since when these used to die off wholesale after hot weather set in. It was difficult to find the real cause, but one existed that baffled best efforts to find out. Soakings of water seemed at times to rather accelerate than check the evil. Whether due to a fungus or what cause could not be discovered. It was, however, an undoubted fact that the evil was rarely operative in the case of old plants or those put out in the autumn, and thus not only well established, but having several shoots or stems on them. Usually the disease, if it was such, was attributed to heat. If so, we ought to have seen these Pansies severely injured in 1893, but they did, having regard to the heat and the drought, pull through pretty well. I saw that year in Kent on an open, exposed site most beautiful masses of plants far excelling anything usually seen in gardens, and yet far removed from water. They were spring-planted, but chiefly of varieties introduced within the past six or seven years. It is, indeed, a great gain to be able to summer these tufted Pansies in this way in the usually too arid south. For such uses as are termed summer bedding, they now rank amongst the most persistent bloomers and the most beautiful. A few good sorts of distinctive colours suffice, and from these may be obtained effects of the most attractive description. A. D.

**A HYBRID TOBACCO.**

THE photograph of the very notable plant here figured Mr. Burbank sends us from his garden in California. He describes it as a hybrid between *Nicotiana glauca* and *N. glauca*, and much finer than either parent. Evidently the plant is worth inquiring about, judging from its growth in a climate like that of California.

**Losses in herbaceous plants.**—We have this spring to bemoan the loss of many valuable denizens of our herbaceous borders. *Romneya Coulteri*, which had made strong sappy growth at the end of the year, was cut to the ground, the mischief extending to the roots, most of which were rotten when the plant was lifted a short time since. Such roots as were sound were cut off and laid in damp cocoa-nut fibre at the shady end of the greenhouse, as recommended on page 101, vol. XXIX., of THE GARDEN. *Erigeron speciosus* (often known as *Stenactis speciosa*) and *E. mucronatus* (the Mexican Daisy), the latter an almost perpetual bloomer and quite a gem in its way, are dead, as are *Stokesia caryophylla*, *Scabiosa caucasica*, *Coreopsis grandiflora*, *Linum flavum*, and the Tree Lupin. These, with the many beautiful flowering shrubs that have been killed or badly injured by the severe winter, have made gaps in the borders, which it will be hard to adequately fill during the present year. Curiously enough, the slugs and snails, contrary to expectation, are more troublesome than has been the case for many years. While the arctic winter seems not to have affected them in the least, the ranks of their natural enemies, the birds, have been sadly thinned, which may in part account for the present visitation.—S. W. F., *Torquay*.

***Incarvillea Delavayi*.**—I note in your last issue of THE GARDEN that Sir T. Lawrence showed this plant in flower at the Temple show, and for which a first-class certificate was awarded by the Royal Horticultural Society. A very fine specimen of this rare Chinese plant was also exhi-

bited by Mr. Thos. Smith, of Newry, at the Lerne Bazaar, held in Dublin last week, where it was much admired on Mrs. F. Trouton's flower stall. The plant was growing in a pot and had been wintered in a cool house, but other specimens have passed through the late severe winter in the open air at Newry, and are now throwing up their leaves and flower-scapes. The flowering specimen referred to above had four or five very stout pinnate leaves 10 inches or 12 inches in length, of a deep green colour, and of leathery substance. The flower-stalk was 15 inches to 18 inches in height, and bore four to six very large rosy flowers not unlike those of *Bignonia grandiflora*. One curious point about the flower is the highly sensitive stigma, which is two-lipped, as in the genus *Mimulus*, and the expanded lips close quite suddenly on the stigma being artificially irritated. Although the plant is, under favourable outdoor conditions, perfectly hardy, the large tubular flowers do not appear likely to withstand high winds or heavy rains with impunity, and it may be wisest to treat the plant as half-hardy for the sake of seeing its showy flowers at their freshest and best. It is one of the most remarkable of new plants from China, and promises to become a valuable addition to greenhouse flowering plants.—F. W. B.

I have now in flower *Incarvillea Delavayi*. It is in the open border, where it has been a year or more, having stood the full brunt of a zero temperature. I have a smaller plant in a pot, but not so forward and not nearly so fine, a weaker specimen altogether. It has two stems, bearing a corymb (which will lengthen out into a raceme) of twelve or thirteen flowers, *Gloxinia* or *Bignonia*-shaped, tube  $2\frac{1}{2}$  inches long, limb  $2\frac{1}{2}$  inches across, delicate rose or rosy pink, throat yellow, streaked purple. I observe that Mr. Bain, Sir Trevor Lawrence's gardener, exhibited a plant at the Temple show raised from seed I supplied him with in 1893. He has sent me a flower which shows that my plant is the same, though raised from Charles Naudin's seed labelled *I. alpina*. No such name is known at Kew, and it is clear it is only a synonym.—Wm. THOMPSON, Ipswich.

#### PINKS.

THE cold weather and the accompanying dryness of soil and temperature are causing Pinks to spindle, that is, to throw up weakly flowering stems, whether it be the common garden varieties or the more refined laced Pinks. Unless warm rains and a higher temperature come soon, a fine head of bloom can scarcely be looked for. This is one reason why Pinks planted in the open in autumn do so much better than those planted in the spring, and especially is this true of the florists' laced varieties, and yet many persons do not think of ordering plants of Pinks from a nurseryman until April; and if they are supplied and planted thus late the flowers are rarely satisfactory. It used to be the custom with some trade growers of Pinks to winter some of their plants in 3-inch pots with which to supply orders in spring, and when these were carefully planted out and well looked after they produced good flowers, though they were never so reliable in the quality of finish as those planted out in autumn. It is sometimes said that the florists' laced Pinks are of no value for borders, but this is a great mistake, and made only by those who are imperfectly acquainted with their dense compact growth and freedom of bloom. Boiard, Empress of India, John Ball, Mrs. Thos. McCrorie, Modesty and Mrs. Waite are all capital border varieties. Other good border Pinks will be found in *Anne Boleyn*; *Ascot*, pink, with crimson centre; Mrs. Lakin, white, dwarf and free; *Alba magnifica* and *Snowflake*, two excellent white selfs, admirable for cutting (the three white Pinks just named do not split the calyx as do the common white and *Her Majesty*); *Souvenir de Sale*, deep, rosy pink; and of the small-flowered section, which are always so attractive at the Chiswick gardens—*Annie Bolton*, *Beauty*, *Charmer*, *Hetty Dean*, *Rosy Circle* and *Sir Hugo*. One of the incidents of the present

spring is the remarkable recuperative power shown by many of the garden Pinks. Where they were growing in somewhat low, heavy, moist land, plants suffered a good deal, but the hardy border varieties showed remarkable vitality, and plants which at one time appeared hopeless are covered with foliage and will bloom freely.

Then of the florists' laced varieties, a few of the very best will be found in *Clara*, laced with reddish purple, fine petal; *Rosy Morn*, rose lacing, large and full; *Harry Hooper*, rich dark lacing, a fine variety; *Boiard*, one of the very best laced varieties, very full, and a good grower; *Modesty*, pale rosy purple lacing, an early flowering and excellent exhibition Pink; *Empress of India*, rich dark lacing, a distinct and fine variety; *Duke of York*, a new midland-raised Pink, extra fine for exhibition, having a rich dark lacing; *The Rector*, heavily laced with bright reddish purple, extra fine; *Favourite*, heavily laced with reddish purple, extra fine; and *Princess Louise*, red laced, large and full.

Pinks do well in ordinary loam and road sand from a gravelled road and an abundance of well-decomposed manure. Old lime rubbish suits the Pink well, but as it is sometimes difficult to procure, road sand or gravel sand will do very well. Good Pinks always repay a mulching with manure in spring, and in addition to being a fertiliser, it keeps the soil about the roots cool and moist. The Pink being quickly susceptible to drought and injured by it, propagation is done at the end of June or early in July, pipings or cuttings being made of the young growths and rooted in sandy soil under a hand-glass or in a small close frame. Many growers layer their Pinks as they do their Carnations, and in this way they obtain strong, vigorous plants for planting out at the end of the summer to bloom in the May following. R. D.

### ORCHARD AND FRUIT GARDEN.

#### SELDOM-GROWN GRAPES.

OWING to the rage for large-bunched showy Grapes, many of the smaller-sized, though exquisitely-flavoured, varieties have gone out of cultivation, or are found only in isolated places. This is to be regretted, as in large establishments, at least where there is plenty of glass, a house might be devoted to their culture; and as some of them keep well when thoroughly ripened, a supply of these rich varieties might be had over a considerable time. Take the *Frontignans* for instance, both the *White* and *Grizzly* being of exquisite flavour and easily grown on a dry warm soil. The latter is not taking in appearance owing to its colour, but the berries are larger than those of the white variety, and it crops heavily. Both these Grapes are admirably adapted for pot culture. *Duchess of Buccleuch* is another free-growing and free-bearing Grape, possessing a flavour unsurpassed by any other, and producing long tapering bunches. The smallness of its berries is against it, and has no doubt prevented it from becoming popular. The *Duchess* is, however, well worth growing where room can be spared. Dr. Hogg—raised by the late Mr. Pearson, of Chilwell—is a deliciously-flavoured Grape, the bunch medium-sized, the berries rather small and round. This Grape also requires good cultivation and a warm dry soil, but this it will well repay. Mrs. Pearson and *Golden Queen* are also the result of the late Mr. Pearson's skill, both deserving to be more extensively grown than they are at present. Under good culture these will produce bunches and berries large enough for anything, and the liability of *Golden Queen* to become muddy when on the point of ripening may be overcome by giving the roots

a shallow, somewhat sandy rooting medium, and a light, airy house with plenty of heat. Mrs. Pearson has no such defect, and will, in my opinion, become ere long a leading white market Grape. Lastly, *Royal Vineyard* must be included in the list, as for flavour and keeping qualities it has no equal, *Muscat of Alexandria* not excepted. The wonder to me is that while some of the thick-skinned, indifferently-flavoured late Grapes are grown by almost everyone, *Royal Vineyard* should be so seldom met with.

All the foregoing are well adapted for pot culture or for growing in limited borders in small light houses where a certain amount of bottom heat could be turned on when the Vines were started. Canes sufficiently strong for fruiting can be grown in one season. Many think two seasons are necessary, but the fact is that in their anxiety to get extra strong rods, growers use far too large pots and give an unnaturally strong bottom heat. Such Vines lose many of their roots in winter, and although they may break strongly and look well while the stored-up sap lasts, they ultimately give way and produce inferior crops of Grapes. I have grown Vines in pots only 9 inches in diameter that have fruited well the following year. These had no actual bottom heat after receiving their second shift, and instead of being grown on in a stewing atmosphere, as is too frequently the case, they had plenty of air, and only an occasional syringing to keep them free from spider. In such sized pots the Vines can be fed without any fear of souring the soil, while the roots being numerous, hard and healthy, not only survive the winter, but are ready for action when started the following spring. If a light well-glazed lean-to house of medium size containing a bed furnished with hot-water pipes can be spared, so much the better, as the young Vines may then be planted out of 6-inch pots, grown on the first year and fruited the next. In such a structure their special wants can be attended to with comparative ease, and the comparatively small root run is conducive to a good set, high finish, and flavour. One amateur in the neighbourhood of London grows these *Frontignan* flavoured Grapes very successfully, and should others who have the convenience follow suit, they will find them to be not only highly interesting, but profitable. J. CRAWFORD.

**Apple Cox's Orange Pippin.**—The other day I was afforded an opportunity of inspecting the Apple plantations of Mr. Archibald Weir, near Ottery St. Mary, East Devon, and was much interested in what I saw. Mr. Weir's orchard lies at an elevation of 500 feet above sea level, and is on the side of a hill facing east. The soil, which has an average depth of 10 inches, and with which a large percentage of siliceous sand is incorporated, is light and porous and still contains a considerable quantity of water-worn pebbles, although many cartloads have been collected and removed. The staple may be tersely described as a sandy moorland soil. The subsoil consists of a ferruginous sand, into which the roots show no disposition to wander. At the first glance both site and soil appear eminently unsuited to the growth of Apple trees, but a survey of the 8 acres devoted to their culture, nine-tenths of which is occupied by Cox's Orange Pippin on the English Paradise stock, suffices to assure the doubter that the trees are happy. A plantation of seven-year-old trees has stems 6 inches in circumference, the lowest branches starting a foot from the ground-level and curving outwards and upwards to a height of 9 feet. The trees are open in the centre and have from seven to ten main branches, which are well ripened, short-jointed and carrying a good amount of blossom. These are the trees from which the splendid sample of fruit, averaging 9 oz. apiece,

which took first prize at the Exeter show in 1893, were produced, as well as many dozens that were sold to a West-end, London, fruiterer at 4s. per dozen, some of which fruits were subsequently re-tailed at 8d. apiece. There is no doubt but that Cox's Orange Pippin is thoroughly at home in Mr. Weir's grounds. Many other varieties have been planted experimentally, but none appear to flourish so satisfactorily, with, perhaps, the exception of five trees of Ribston Pippin, which were looking remarkably well at the time of my visit. The trees have had no manure, natural or chemical, either at the time of planting or since, nor have they ever been mulched, but poultry are allowed to run in the several plantations. No crops are grown between the trees, and, the ground being continually stirred, the surface is always kept loose. Mr. Weir admits the possibility of the trees not lasting, but as a contiguous orchard contains trees fully fifty years old, which are blossoming profusely and still look in the best of health, there seems no reason to fear a premature collapse. The plantations certainly do not suffer from lack of attention, but no amount of care will produce perfect trees and fruit of that prince of Apples, Cox's Orange Pippin, unless soil and situation are both to its liking.—S. W. F.

**Apple King of the Pippins.**—There cannot be any doubt as to the merits of Apple King of the Pippins, and which has been referred to both by "W. G. C." and Mr. Wythos. In this district it is largely grown for market, the farmers securing a good price for fine fruit. In fact, Prince's Pippin, the name under which this Apple is locally known, will always sell well. As to whether King of the Pippins and the true Prince's Pippin are synonymous, I now have doubts, although generally supposed to be. As evidence of this, at a show last autumn where I was one of the judges, in a class for six dishes of Apples distinct, King of the Pippins and Prince's Pippin were both staged, but although bearing a slight resemblance, they were both quite distinct. A local nurseryman also told me—and he showed me fruit to bear out his statement—that they were both distinct and that he could supply trees of both. So if a person applied to him for Prince's Pippin he would certainly not be supplied with King of the Pippins or Golden Winter Pearmain, although this might be the variety he required.—A. YOUNG.

**APPLE WELLINGTON, OR NORMANTON WONDER.**

AMONGST all the many excellent varieties of cooking Apples there is none that is in so much request by first-class cooks as the above variety for mince-meat, and, as a rule, gardeners are careful to retain it for that purpose. Again, as a market variety it is deservedly popular, as proved by the large demands by salesmen for it about Christmas and early in the new year. One salesman in the north of England informed me about two years ago that he should have no difficulty in disposing of 100 tons per week of Dumelow's Seedling—a name by which it is better known in that market than Wellington—in spite of all the foreign consignments, as even the most select Canadian or American varieties could not approach it for cooking and high quality. In face of these many good recommendations, it may be asked why it is not more grown to produce fruit in quantity for home consumption and market work. The reply to such a query is, that, unfortunately, the tree does not succeed in an altogether satisfactory manner on all soils. My experience of the variety is that it is the soil alone that is the cause of the trees not answering, as I have seen and had to deal with the variety in very exposed positions where few sorts of Apples would grow and bear, but Wellington rarely failed to be prolific annually, while on richer, deeper

soil, and apparently all in favour of the most successful results, the trees were very subject to canker, and made a weak, diseased growth. Provided a grower is certain that from actual experience Wellington will not canker and do well on his soil, I would strongly suggest planting it on a large scale, as few varieties will pay so well, having in addition to the advantages enumerated that of being saleable at any time from the end of September to the end of May, or even longer if stored in a good fruit room. At the latter season good and even samples will realise from 25s. to 30s. per cwt. through the hands of a salesman, probably more if consigned direct to a fruiterer doing a large business.

Returning to the soil and its effects on the trees, I believe that it points out to some element being deficient. It behoves the grower to try and discover what the lacking constituent may be, and then supply the same. On our light soil, bush trees exhibited great



Apple Wellington.

debility, and in spite of mulching with manure and adding fresh soil to induce a more healthy and vigorous growth, no improvement occurred until potash was applied. At first German salt or kaimit was employed at the rate of 4 cwt. or 5 cwt. per acre, but of late years I have used muriate of potash, as it contains a much greater proportion of the necessary element, railway carriage is less, and it is less labour to apply, as only about half the quantity is required per acre than with kaimit. Since applying potash a most marked improvement has taken place, growth being vigorous, the trees prolific, with fruit of high colour and handsome shape, as in the illustration. On heavy soil an application of iron in the form of basic slag might be tried with, I think, beneficial results. Some trees that I saw in Staffordshire had a dressing of 4 cwt. per acre, and the fruit produced the year after would have been highly creditable to the best district in the kingdom; in fact, I have not seen any better coloured Wellingtons than they were. However, only

careful experiments will prove what is the most suitable chemical manure to apply, as on some land none of the above might be of much service, and lime be the chief element absent. In such cases I would not apply ordinary lime, but give a dressing of bone-meal or superphosphate. By the above means, trees that are in an unsatisfactory condition may be greatly improved and so invigorated, that really good fruit of Wellington will in time become assured.

W. G. C.

**Strawberry Royal Sovereign.**—This new Strawberry is a great favourite with Mr. Salter, of Woodhatch Gardens, who now prefers it for early forcing to all others. The fruits come with him of great size, rich in colour, and of excellent flavour. He mentioned that but a few weeks back a local dealer expressed a desire to purchase for the sum of £5 the produce of twenty-five plants, picking the fruits as he needed. That, of course, seems a big sum, but allowing three-quarters of a pound of fruit to each plant, making a total of 18½ lbs., the sum is not excessive, especially for so fine a sample. Still the price quoted serves to show something of the market value of good forced Strawberries.—A.

**Grape Madresfield Court.**—It will have to be a grand Grape which will supplant the Madresfield Court, but the pity is that with some people it is addicted to cracking. The observations of "W. I." (p. 365) are opportune, as any hints bearing upon this evil of cracking cannot but be of benefit. That cracking can be prevented has been proved again and again, but the grower in any case has to be on the alert. By my employer this Grape is thought much of, therefore care is taken to prevent it in as good a condition as possible. As stated by "W. I.," fluctuations of temperature are certainly inimical to its well-doing and will surely lead to wholesale cracking. My impression is that under-thinning is also answerable in some cases for cracking. As proof of this, last season I had a few bunches which were under-thinned, and at the extreme point of the berries a little juice oozed out and decay was not long in setting in afterwards. Other bunches which had been well thinned were not injured in the least. The bunches of this Grape must undoubtedly be well thinned. I have no difficulty in colouring up the larger berries, and I never saw larger than those produced in this garden. Over-cropping and starvation are the two evils to guard against. Starvation can take place other than from the want of nourishment at the roots, and that is by keeping the viney too cold and draughty. The hints given by "W. I." to prevent cracking I fully agree with.—A. YOUNG.

**Two good early Nectarines.**—Out of all the many excellent exhibits at the great show held at the Inner Temple Gardens none were so interesting to fruit growers as the remarkably fine collection of Nectarine trees staged by Messrs. T. Rivers and Son, Sawbridgeworth. The feature of this exhibit was the very prolific habit of the trees and the large size and deep rich colour of the fruit. So far as I could see, only two varieties were staged, viz., Early Rivers and Cardinal. The former I have known for a year or two. Unlike some of the early class of Peaches and Nectarines, there is no bud-casting, with its attendant loss of crop and disfigurement of the trees by long stretches of bare wood. Cardinal is stated to be fully equal to Early Rivers in every respect, and, judging from the trees staged, it is worthy of a place in every garden where early Nectarines are required. Messrs. Rivers and Son's representative informed the writer that the trees shown were not started until after Christmas, and ever since the time of starting they had been grown in a comparatively cool house that had only two rows of pipes in, *i.e.*, a flow and return. I think this speaks volumes for the value of the two varieties, as, after many years' experience of early forcing, I have never found any sorts that would produce similar results in the time. When we ca

grow varieties that will bear fruit about the middle of May with moderate forcing from the end of December, it means a considerable reduction of expenditure in fire, labour, &c., to the market grower, to say nothing of the boon they are to the gardener in a private establishment. Another feature of both Early Rivers and Cardinal was that the fruit in the most shaded parts of the trees was equally as well coloured as that exposed to the sun. Many fruits were on bottom branches, heavily shaded by overhanging shoots, but, in spite of the unfavourable situation, the colour was perfect. The flavour of Cardinal is very good indeed, somewhat resembling Pine-apple with a dash of Stanwick intermixed, and is deliciously refreshing.—W. G. C.

#### GRAPE BLACK HAMBURGH.

UNDOUBTEDLY, as "W. G. C." (p. 346) points out, this is the most popular Grape, and it is, indeed, quite indispensable, because from the time when the winter-kept Grapes are gone until autumn comes again there is no other variety so largely used. I cannot boast such a lengthened experience as "W. G. C.," for he says such grand examples as were exhibited twenty years ago are seldom, if ever, equalled now, which would naturally imply that he had matured experience at the time of which he writes. I am inclined to think, however, that a good memory must be in evidence to be able to say that the Grape in question has deteriorated to such an extent as that described. During the last twenty years great changes have been brought to bear on Grape growing, and certainly I had thought that the growers of the present day were equal to those of twenty or more years ago, whether it appertained to Black Hamburg or any other variety. I know there are records of some exceptionally large bunches having been grown, but I fully expect in some instances there were local influences apart from the general cultivation to account for such extraordinary bunches.

Although the modern lightly-built vinery may not be so favourable for the Black Hamburg Vine as that with more wood and less glass, some exceptionally fine Grapes are still grown and exhibited, and I have sufficient confidence in the present generation of Grape growers to think that quite as good are produced now both in point of bunch, berry, colour, and bloom as those known to "W. G. C." twenty years ago. In my own district is a garden that many years since had a fame for large bunches of Black Hamburg. Since that time the old structures have been swept away, and more modern ones erected in their place, and first-class Grapes are grown now as then.

As an exhibition Grape it may not be grown so largely as it used to be, because there are other varieties in the field. Madresfield Court is a great favourite both among exhibitors and judges at the summer shows, and if this is staged in its best form, it is seldom that it is beaten by Black Hamburg. Gros Maroc, too, comes into competition, having such fine berries and of a jet-black colour. For quality of course it cannot compare with the variety in question, and it is not reliable in bunch, at least not generally, as with many it has a fault in coming small. At late summer exhibitions Alicante often figures largely and well, and I think it quite possible that the appearance of these varieties in competition with Black Hamburg has led "W. G. C." to assume that it has lost some of its old form and grandeur.

Colour is so often the determining point with judges at summer shows, that Madresfield Court, Gros Maroc, and Black Alicante get the most

favour; the Hamburg, owing to its not retaining its colour long after it is fully ripe, being often placed in an unfavourable position. It does not matter what value the Black Hamburg may have possessed a month previous to any exhibition, if it has to be staged among well-coloured Alicante, Madresfield Court, or Gros Maroc it must naturally be seen at a great disadvantage, when its colour is going off. Presented in its highest perfection, Black Hamburg is beaten only by accident by the other sorts named.

On the old system of growing these Grapes "W. G. C." says the borders were made of sound fibrous loam and lime rubble, and very little manure beyond a mulch from the farmyard every spring. How many an old Vine border has been the grave of dead horses and other animals, those who had them so buried evidently believing that great virtue was obtainable from rich food other than natural manure. My experience of Vine roots is that, unless something tempting is put on or given more often than once in a season, they will not long remain in the border, but ramble away in search of fresh food in the garden. I know of many cases where Vine roots are dug up every year in the open ground away from the border, and the more heavily the soil is manured the more abundant are the roots. A hard gravel path is no barrier to them, nor is a brick wall if they are bent on a search for food. The grower who produces the best Black Hamburg Grapes, I see, each year resorts to high feeding, something of a stimulating nature being given each time the Vines are watered, and he is undoubtedly an enviable prize-winner.

WILTSHIRE GARDENER.

**Fruit prospects in South Devon.**—While looking over a plantation of young Apple trees on the Paradise stock the other day I made a few notes as to the prospect for fruit given by the different varieties. Bismarck, Duchess of Oldenburg and Cellini are in profuse bloom. Lord Suffield, Potts' Seedling, Ecklinville Seedling, and Lord Derby are good, while Cox's Pomona, Lane's Prince Albert and Warner's King are fair. Beauty of Bath, Peasgood's Nonsuch, Dumelow's Seedling, King of the Pippins, Red Astrachan and Worcester Pearmain are very scanty. Lady Sudeley, Blenheim Orange and Lord Grosvenor have no bloom. The soil in this instance is heavy and retentive and most of these young trees bore well and had to be severely thinned last year.—S. W. F., *Torquay*.

**Bowood Muscat and other Grapes.**—I am greatly obliged to Mr. Crawford for his "correction," but really it was the remark of Mr. Crawford which prompted me to send notes of observation on this Grape. It must have been in one of the other journals probably in which the article was published identifying the Grape referred to with Muscat of Alexandria. I pass my gardening papers (six in number) to the young men and have not yet examined them, but I am quite in touch with the remarks of Mr. Crawford, and perfectly sure that purchasing the Bowood as another variety is in many cases quite chimerical. Circumstances, I know, change the character of many Grapes. I remember in my earlier gardening days the altercation which took place with the late Mr. Denholm at Broommouth, East Lothian, and a number of experts, who could not accept his monstrous Muscat of Alexandria as being the real old favourite. I did not; but certainly did not believe it was the old third-rate sort, White Tokay. Mr. Thomson (then at Archerfield) cleared the matter up, and wrote that the Grapes were a true type of Muscat of Alexandria. They were proved by inarching or grafting on Archerfield Vines, and no doubt were a triumph for Mr. Denholm, who grew berries to such a size (minus flavour) for exhibition, that

they deceived the *sarantsat* Edinburgh. I remember my late friend Mr. Cramb, at Tortworth, doing something of the same kind. I also remember Mr. Spencer's (then of Bowood) challenge to Mr. Cramb, who said that Bowood Muscat was Muscat Escholata. I have many notes on the varieties of Hamburg, which are at least four in number.—M. TEMPLE, *Carvon, N.B.*

**Good late Apples.**—The fine collection of Apples put up by Messrs. G. Bunyard and Co. at the Temple show should prove to the most sceptical that by a judicious selection of varieties we could produce Apples that would meet all demands without calling in the aid of the foreigner. The whole exhibit was very good, but amongst the varieties that were particularly fine, mostly high coloured, and remarkably plump, I noticed Calville Rouge, a variety that has kept sound with me for several years into August; Wagener, a nice large red Apple; Calville Malingre, well coloured, and of fair size. Newtown Wonder was especially noticeable for its handsome colour and shape, also looking as fresh as if just plucked from the tree. King of Tompkins County evidently succeeds better with Mr. Bunyard than with me in Herefordshire, never having had it so good in appearance as the dish staged. Alfriston had kept very sound and well; also the Melon Apple, which is an excellent late dessert Apple worthy of a wall in cold districts. Tibbett's Pearmain was in prime condition, and is a dessert variety that I believe will be more grown as its merits for late work become more fully known. Striped Beaufin and Annie Elizabeth were excellent, particularly the former. Ribston Pippin is seldom so plump and fresh towards the end of May as in Mr. Bunyard's collection. High Canons was also fine, with many others. Another grand late variety that I did not observe staged was Lane's Prince Albert, but possibly this was an oversight on my part.—W. G. C.

#### KITCHEN GARDEN.

##### VEGETABLES AT SYON HOUSE.

Those who read the reports of the meetings of the Royal Horticultural Society will not need to be told that Mr. G. Wythes, gardener at Syon House, Brentford, figures very frequently as a successful exhibitor of vegetables. If any or all of these various exhibits had been specially prepared for exhibition there would have been less room for congratulation. As it happens, nothing of the sort is attempted, and all that has been exhibited I can very well believe were simply some of the best of what is grown on an extensive scale to meet the demands of a large establishment. During the prevalence of the severe frosts last winter and for many weeks, or up to the present time, fresh vegetables have been very scarce indeed, but, judging from what I saw recently at Syon, the scarcity has not been much felt there. Nowhere else have I seen such grand beds of spring Cabbage. In one breadth there were 2000 plants to be seen, all of which had stood through the winter, and would form a close succession to another still earlier batch that had been cut from since April 9. The varieties that have done such good service are Ellam's Dwarf Spring and Veitch's Matchless, the latter not greatly differing from Ellam's. Mr. Wythes makes two sowings, the first on or about July 10 and the second about ten days later. The earliest raised plants, although a great success this season, are not depended upon so much as those raised later, and which are planted the most extensively accordingly. All are planted in succession to Onions without any preparation of the ground beyond cleaning, and this firmness of root-run is the salvation of the plants, as it invariably promotes a sturdy growth, neat hearts, and but few outside leaves also resulting. The plants are disposed 12 inches asunder in rows 18 inches apart—a very different arrangement to that favoured by the old school of gardeners.



Spinach, again, passed through the winter comparatively uninjured, and although large quantities were gathered almost daily from the time milder weather set in, many sacks of it were growing to waste when I was at Syon. Mr. Wythes has been a consistent advocate of the merits of the variety *Victoria*, and there is no mistaking its superiority over the older and much smaller-leaved forms. The first sowing of winter Spinach is usually made on or about August 10, a second sowing not being made till five or six weeks later. Well-prepared ground is devoted to these important crops. Late autumn and successional gatherings are made from the earliest breadths whenever the weather is sufficiently open, but the later sowings are not available till the spring. More seed was sown during the first week in March and the plants duly thinned out. Such a grand lot of great succulent leaves as were to be seen during the third week in May would have convinced anyone of the immense superiority of the *Victoria* over the older forms of Spinach.

Very few gardeners can claim to have cut many Broccoli this year, but Mr. Wythes had a good supply at Syon, several hundred plants having been saved. It must not be thought that Syon Gardens enjoy any great immunity from frosts; sheltered they are to a certain extent, but seeing that they are only a short distance from the Thames and are nearly surrounded by other water, they would appear to be more than ordinarily liable to suffer from frosts. The Broccoli saved were principally Veitch's *Medel* and *Cattell's Eclipse*, though both well tried hardy varieties would probably have succumbed to the frosts had they not been heeled over or laid. During the second week in December trenches were opened on the north side of the plants, and these were then heeled over, the soil from the next trench being banked well up to the leaves, so as to effectually protect the most vital part of the plants, viz., the stems. The work was done in no half-hearted manner, and this, coupled with the late date of carrying it out, made it next to impossible for the heads to draw up again. Large hearts were not had, nor are they desirable at any time. Even if they were it would yet be conceded that small hearts are better than none at all. Cauliflowers would follow closely upon Broccoli. The condition of the Cauliflower plants fairly surprised me. A south border was filled with about 1300 plants, many of them forward enough to be cut from before the end of May. The varieties preferred are *Dwarf Erfurt* for the earliest supplies and *Walcheren*, the latter proving superior to *Early London*. Seed was sown on or about August 15, and the plants resulting wintered in handlights and rough frames. No coddling or undue protection is afforded, and, as a consequence, the plants are this season sufficiently hardy to move into the open border during the second week in March. They are found to move best out of 3-inch pots. In addition to well manuring the ground for this crop, guano is also freely washed down to the roots after active root and top growth has well commenced.

Kidney Beans are in great demand at Syon nearly or quite all the year round, and in order to relieve the forcing houses and pits of the strain upon them, as well as to save labour, open-air culture, or what may be termed such, is started upon as early as may be attempted with a reasonable prospect of success. A selection of the old *Mohawk* is mostly relied upon, another old favourite with me, *Syon House*, also being grown. The seed is sown thinly in 3-inch pots during the first week in April, and placed in cold frames rather than heated structures to germinate, while the plants are further kept as hardy as possible. When strong enough and before becoming much root-bound they are planted out on what were formerly outside Vine borders, and roughly protected with frame-lights and hand-lights. By the end of May the first gatherings would have been made. Extra pains are also taken in forwarding *Broad Beans*. In this instance Veitch's *Early Longpod* is sown in boxes late in February and

placed in cold frames, and the plants resulting kept hardy. They were duly planted out, quite in the open, thinly in rows 2 feet apart, and when I saw them on May 20 pods were setting freely, gathering taking place presumably nine days later. *Early Peas* were in an equally promising condition. The varieties favoured are *Chelsea Gem* for the earliest, with *Stratagem* and *Duke of Albany* to afford a good succession. All were sown at the same time, or about the first week in February, in 5-inch pots and placed in cold frames. They were planted out on warm borders during the third week in March, or later than usual, and the crops were, as a matter of course, also later, as there would not be many pods fit to pick before the end of May. *Duke of Albany* when about 2 feet high is frequently topped, this causing it to branch freely, and, as treated by Mr. Wythes, is unrecognisable, but the plan is evidently a good one, as it promotes early cropping and does away with the necessity for using tall stakes.

Lettuces were abundant and good. The varieties *Golden Queen* and *Early Paris Market* sown in boxes and the plants duly put out on warm beds and borders heart in surprisingly quickly. *Perfect Gem*, another popular Cabbage Lettuce, giving a capital succession. Turnip-rooted Beet is also raised in boxes, and the plants dibbled out at the foot of a south wall and other sheltered positions. The seed was sown during the first week in March, and three months from that date the roots would be quite large enough for use. As it happens, Mr. Wythes has abundance of old roots of the *Cheltenham Green-top Beet*, and these are comparatively fresh, richly coloured, tender, and sweet—second to none, in fact. The white and purple-topped *Early Milan Turnips* sown on a warm border the last week in February or early in March were large enough to pull when I saw them, and the same varieties grown in frames had been in use for six weeks previously. Potatoes *Early May* and *Veitch's Ashleaf* were very forward among fruit trees in borders, and the first named, together with *Sharpe's Victor*, are the favourites for frame culture. Asparagus is largely forced in frames, and a grand supply, commencing late in February and continuing till unprotected beds are productive, was had, as usual, from protected and gently forced beds. These latter are permanent, and have been in existence thirty years. They have pigeon-holed sides; the pits between are filled with leaves, and shutters are used for protection. The plants are kept in a very vigorous state by means of fish manure and abundance of water and liquid manure. Seakale is grown next to these beds, and the half rotten leaves from the pits are utilised for blanching the tops of the unforced portions.

Globe Artichokes are far from being hardy at Syon, but Mr. Wythes knowing this is never caught napping. It is his practice to winter a number of rooted offsets in frames and plant out early in the spring. It is worthy of note that *Turnips Yellow Malta*, *Petrowski* or *Finland*, and *Chirk Castle Blackstone* stood well where grown, and were in good condition for table use after the frosts left the ground. Of winter green vegetables the hardiest were *Brussels Sprouts*, *dwarf Scotch Borecole*, *Asparagus*, and *Cottagers' Kale*, and late raised plants of *Read's Hearting Borecole*. Mr. Wythes has succeeded in effecting a cross between *Asparagus Kale* and the old *Ragged Jack*, and a good breadth of this distinct novelty will be planted this season. Judging from the extraordinary number of plants in seed beds or already planted out, there is little likelihood of a scarcity of vegetables being experienced at Syon next winter, and altogether it is doubtful if a better managed garden can be found anywhere.

W. INGULDEN.

**Late Potatoes.**—In the majority of cases these will now be through the ground, and, taking advantage of the bright weather, the plots should be hoed through and all weeds killed in their infancy. Those only who are short of labour know the value of taking such work in hand in

the nick of time. If weeds are allowed any grace and the weather should set in rainy, it is often with difficulty that Chickweed and other rapid spreading weeds are eradicated; consequently the Potatoes do not get a fair start. The admission also of sun and air into the surface works wonders amongst Potato crops. Where the soil is shallow and poor, and manure was not over plentifully supplied when the ground was dug, the present time is opportune for giving a liberal broadcast sowing of some good artificial manure. This will wash in with the first rain and prove of great value. Crops grown in fields for winter and spring supply must be similarly treated if the best results are expected. The horse hoe must be put between the rows, and that portion of the ground nearest the Potato haulm which this implement cannot touch cleaned afterwards by the aid of hand hoes. It must be borne in mind that in field culture clearing the ground from weeds as soon as the growth peeps through and subsequent frequent surface stirrings are of as much value as manure.—N.

**Open-air Tomatoes.**—By this term I do not mean plants having the advantage of a wall, but those on open quarters. The middle of June will be the best date for the final planting of this batch, which should consist of the more hardy varieties recommended some time back. If the plants are not thoroughly hardened, it will be wise to keep them in the shelter of the frame-yard for another week, feeding them a little if the pots are full of roots. Do not add a lot of rich farmyard manure to the ground they are to occupy, as, independent of encouraging disease, plants so treated often run off into strong, long-jointed growth and fail to set any fruit until late in the season. A sheltered piece of ground from which early Peas have been cleared will answer well, nor is it advisable to again dig it, a firm root-run being conducive to a moderately slow growth and final fruitfulness. After planting, leave a shallow basin round each stem, so that water will find its way through the ball, and support each plant by a stout stake. As growth advances, remove all side laterals, pinching the main shoot out when the summit of the supports has been reached. Where the soil is shallow and very warm, a mulch later on will aid in retaining root moisture, but this should not be laid on very thickly.—C. N.

**Protecting early vegetables.**—I have never proved the advantage of temporary shelter amongst transplanted batches of spring-raised Cabbages, Cauliflowers, Broad Beans and Cos Lettuces more thoroughly than this season. I always sow some of the foregoing in the early Carrot frame, and this year they grew so fast, that they were ready for planting out, so far as size was concerned, before the Carrots could be exposed by removing the light in the daytime. They were put out in March on open quarters and thickly screened by Yew boughs, and although cold cutting winds prevailed for weeks together at that date in this district, the plants have done well, and will well repay the extra trouble bestowed on them. Many ignore this coddling, as they call it, but when their plants are ruined from exposure they find to their sorrow that the trouble of raising and establishing secondary batches, and of pushing them on to atone as much as possible for lost time, far outdistances that which would have been necessary in the first instance. Our garden lies rather high, and not being over well sheltered, catches much of the cold spring wind; hence the great necessity for screening early vegetable crops.—C. H.

**French Beans.**—Sometimes in large gardens no more dwarf Beans are sown after the second lot of *Scarlet Runners* is in the ground. This is a mistake, as, unless many rows of the runner type are grown, there is liable to be a break in the Bean supply owing to very close pickings. If a small batch of the French type is sown every three weeks, duly thinned and occasionally watered, they will, if old pods are not allowed to accumulate, yield over a long period. Any out-

of-the-way corner or nook may be utilised by the dwarfs, and the best plan is to sow each time two or even three sorts, as no two varieties come into yield exactly together. Canadian Wonder, Negro Longpod, and Webb's Victoria, the last a most valuable Bean on account of its freeness in bearing, dark colour, and good flavour, are all suitable for this time of year.—J. C.

**Successional Runner Beans.**—About the end of the second week in June is a capital time to sow Veitch's Mammoth Scarlet Runner, a fine variety that stands drought well. Except on deep rich soils, the best plan with this sowing is to take out trenches of fair depth, and after laying in the bottom a good thickness of decayed manure, to return the soil to within 2 inches or 3 inches of the top. This will support growth and lessen the necessity of so much watering should hot, dry weather ensue. As it is not everyone that has an unlimited supply of very tall stakes, this sowing may be supported with ordinary Pea rods and the tops pinched. This will cause a more branching habit of growth and a plentiful supply of pods. Give plenty of room between the rows, and sow more thinly than for the earlier crop, as most of the seed will germinate and the ground will not then have to be loosened by pulling out the overplus seedlings.

**Peas and hawfinches.**—Just at this season many gardeners are troubled by hawfinches attacking their early and second early Peas. Those who do not know the bird often blame the sparrow for all the mischief, but, bad as the latter bird is, the destruction he works amongst rows of Peas is comparatively nothing to that of the hawfinch. This bird is in size between a sparrow and a thrush, of handsome mixed plumage and possessed of a powerful bill. A brace of birds will sometimes in the course of a couple of days entirely ruin a good row of Peas. They make their principal raids in early morning, and again just before dusk, their presence being detected by their shrill note. I have caught as many as ten in one season in small iron traps baited with a Pea and sunk in the ground, the bridge of the trap being covered with fine soil. I have frequently had to net my earliest Peas against the hawfinch, and am afraid I shall have to do so this season. It is well where a gun can be used, as the birds do not like the sound of firearms.—J. CRAWFORD.

**Early Cabbages.**—With the finish up of white Broccoli comes a period of scarcity in hardy vegetables that has been largely accentuated by the hard winter. Just now the markets and shops are very bare of any cheap forms of greens; indeed, the barrenness seems to be almost unusually so. Spinach is fairly plentiful, but it never can be a common vegetable, as not only does its leafage under cooking shrink so much, but its taste is far from being acceptable to the bulk of vegetable consumers. Asparagus is plentiful for such a vegetable, but the price (1s. 6d. to 1s. 9d. per bundle) renders its acquisition by the people generally impossible. We have more need than ever now of some undoubtedly hardy early-heating Cabbages. These can generally be found in private gardens where good stocks of Ellam's Early, Early Gem, Early York, &c., are grown, but market growers who have to cater for the million seem still to adhere to the larger hearting and later sorts; hence when, as now, a period of barrenness comes there is in the fields nothing better to eat than mere half-grown Cabbages. Of what use is it to cry about foreign importations when we have now, at the end of May, nothing better to offer the public than such poor material as this?—A. D.

**Notes on Asparagus.**—I was glad to see Mr. Kemp's notes on Asparagus, and especially his objections to narrow raised beds. I never yet met with good Asparagus produced over a series of years from narrow raised beds. It may succeed for the first few years, but afterwards the produce is very scanty. I cannot see how it can be otherwise, the rooting and feeding space being so cramped. The filling up of the alleys with rich

feeding material is a course of treatment which I have had occasion to recommend several times in the pages of THE GARDEN. The bed here is not mulched in the autumn, but otherwise it is treated similarly to Mr. Kemp's. Wood ashes is a capital material for Asparagus. I dress the beds over with this and well-rotted manure in the spring before growth commences, and the result is that the whole surface is a mass of roots. The shoots rise up strong, and the quantity gathered from a given area would surprise many people. Soot, salt and guano I use for the occasional spring and early summer dressings. As a rule, Asparagus roots are too deep, and the soil not open or rich enough for their well-being. Very late cutting is also injurious.—A. YOUNG, *Abberley Hall*.

## GARDEN FLORA.

### PLATE 1017.

#### LUPINS.

(WITH A COLOURED PLATE OF TREE LUPIN.\*)

BROADLY speaking, the genus above named may be divided into three groups, viz., annuals,



*The Tree Lupin (Lupinus arboreus).*

perennials, and those of a sub-shrubby or arborescent character, each alike valuable. The number of species met with under cultivation in gardens is comparatively few, those most frequently seen being either annuals or perennials. Taking them all in all, not only are they a beautiful and interesting, not to say useful, group of plants, but they are all of them of very easy cultivation in any good ordinary garden soil. Especially beautiful and varied are the numerous varieties of annuals which may briefly be described as among the most ornamental of summer-flowering plants. These may be sown in the open ground in March

\* Drawn for THE GARDEN at Gravetye Manor by A. F. Hayward, June 14, 1894. Lithographed and printed by Guillaume Severeyns.

or April, or in successional batches in both months, where they are intended to flower, or they may be sown thinly in pots and transplanted.

The perennial kinds are also among the easiest plants to grow, and given a good depth of soil into which they may root freely, they quickly form handsome bushes. These when in flower are most effective. The perennial kinds are readily increased by division and also by seeds. When dividing the plants it will be found a good plan to pierce the prong of a small hand fork into the woody rootstock and then wrench the plants asunder. This is a safer method than using a knife for many things, the latter often causing the loss of many valuable roots. In the case of a good strain of *L. polyphyllus albus* for example, division is the only certain way of increasing it. Notwithstanding good white strains are obtainable from seed, and though the white polyphyllus may easily be distinguished by the foliage alone, there is a good deal of variation in point of purity in the flowers. It is a good plan with these late spring flowering plants to propagate them by division early the previous autumn. By so doing they gather strength before flowering time comes round. There are few herbaceous perennials capable of producing a finer effect in the garden than well-grown and equally well-flowered examples of this white Lupin. An old and common plant it may be, but one of the finest notwithstanding.

The shrubby kinds are of equally easy culture and may be increased freely by seeds or by cuttings slipped off with a heel attached in summer-time and inserted in sandy soil in a cold frame. In this way *L. arboreus* roots freely, or self-sown seedlings may be obtained in the vicinity of the old plants.

*L. ARBOREUS* (the Tree Lupin), represented in the accompanying plate, is a native of North America, from whence it came to our gardens just a little more than a century ago. The pale yellow and fragrant blossoms of the type are abundantly produced, and when the plant attains to a good size it is most effective either in the shrubbery or as an isolated specimen. When fully grown it is several feet high and often 6 feet through, while its silvery and somewhat downy leaves render it quite distinct. It is also an excellent plant against a wall having a western aspect.

The best known of the perennial kinds are

*L. POLYPHYLLUS*, a bold, free-growing perennial attaining 4 feet to 5 feet high and having handsome spikes, about 2 feet or more in length, of blue, lilac, purple, or white flowers. Raised from seeds this is a somewhat variable plant in point of colour, while *L. grandifolius* is a distinct large-leaved form of this plant, also known as *L. macrophyllus*.

*L. NOOTKAENSIS* is a plant of dwarfier and more compact habit, seldom more than 2 feet high. The predominant colour is blue, mingled with more or less intense purple, with veins of a deeper hue. A neat and showy border plant.

The above are those most frequently met with in cultivation, while such kinds as *laxiflorus*, *leucophyllus* and *sub-carnosus* deserve to be more frequently seen than now. Among the more tender kinds *L. mutabilis* is deserving of notice as worthy of cultivation.—E. J.

— The variety figured is a very fine bright coloured one, and the plant most effective when





covered with flowers. There could be no handsomer flowering shrub than this for favoured gardens, and good forms being scarce there is all the more reason to cherish and take care of them. We have raised batches of Tree Lupins from seed and not found one worthy of retention when compared with this good yellow one, the prevalent tones of colour being light slaty-purple or pale yellow in dull and ineffective shades. Any that are clear and good in colour should be increased by cuttings, which when well rooted and planted out in a sunny spot in light loamy soil soon grow into large bushes, and flower abundantly for several weeks during the early summer months.—A. H.

## THE WEEK'S WORK.

### HARDY FRUITS.

**VINES ON WALLS.**—So far, with the exception of a sudden fall in the temperature for a few days, we have had brilliant sunshine and warm nights, similar to the spring and early summer of 1893, one of the best seasons on record for open-air Grape culture. With Vines much healthier than usual, the bunches are stronger. Shoots for extension should be laid in, and those with fruit should be stopped at the second joint beyond the bunch. All laterals should be freely cut out, and in places deficient of wood a strong shoot should be reserved. Only one shoot must be left to each spur, and any lateral growth left to develop should be stopped at the sixth joint. It is well to allow the new growths intended for extension to become a little firm before nailing them to the wall, as in a tender state the shoots soon break. It is best to give a loose tie for a time, and nail back later on when the wood is matured, as it should be borne in mind the young wood of this season's growth will next year produce much finer fruit than the cut-back or spur growth. If a fair quantity of new wood can be laid in each season, there will be finer crops and early ripening is facilitated. By this system much of the old wood which produces a weak growth can be taken out when pruning. In selecting new wood get it as near the base of the tree as possible and allow plenty of room. Thinning of the bunches in the open is not sufficiently practised, but well repays the cultivator, the berries left being much finer and ripening sooner. Now is a good time to feed, as the growth being strong, liquid manure may be given freely. Failing this, guano or any other quick-acting fertiliser should be given and well washed down to the roots. When possible a good mulch will do much good. The best outside Grapes I ever saw were from Vines which had the contents of a small tank emptied on the soil every ten days during the growing season.

**INSECTS ON VINES.**—The Vine is less subject to insects in the open air than under glass, and is more readily managed if a little extra attention is paid to culture. Mildew being the worst enemy should be got rid of as soon as detected. Green and black-fly also attack the young shoots if the roots are dry or require food. Mildew is a terrible scourge, and must be removed, or loss of crop follows. One of the best remedies is sulphur dusted over the affected places, and renewed as required, as damp and rain soon destroy its power in the open. I have also found syringing with a mildew specific of great advantage, as this can be made to cover the back portions of the plant, and if used frequently will clear the enemy. In using the mixture, it is well to syringe afterwards to clear the berries of the specific, as if allowed to rest on the bunch it marks the fruit.

**PEACHES AND NECTARINES.**—Trees of these on walls will now require much attention to keep the foliage in a healthy state, as owing to the cold weather a short time back black and green-fly made their appearance, the leaves curling badly. Unless the pest is got rid of, it will cause

loss of crop and leaves also. I have found the best remedy for black-fly is Bentley's quassia extract. It is readily dissolved in cold rain water, and is far superior to the old method of soaking quassia chips, the extract being ready for use in a few moments. Thinning the fruit should now receive attention. It will be best to remove a large portion of the small fruits, giving those which have got the start every opportunity to swell. There need be no fear of any fruits on healthy trees not stoning, and if the foliage is kept clean and the roots well fed, syringing the foliage overhead in the evening, a healthy growth will follow. Mildew on a few sorts may now make its appearance, and the remedies advised for Vines apply in this case. Thinning and stopping of the shoots will also be necessary. By early stopping and removing useless wood cleansing will be facilitated. The leaders required for extension and the well-placed shoots on the upper sides of the trees should get a support, but merely to keep in position. Any nails or ties must be temporary. Shoots not required for extension and on which fruits are swelling should be stopped at a few joints from the base. In the case of young trees there is no necessity to use the knife too freely, as if the trees are allowed to cover a good space they invariably do better, are much cleaner, and time is saved. Young trees may be given more latitude than older ones, it being an easy matter to prevent grossness by fruiting freely. The ties of young trees should be frequently examined, as they soon cut into the tender bark when growing.

**CHERRIES** are cropping heavily and will need much support in the way of liquid manure and mulching when the weather is dry, these trees in light land soon suffering. I am sorry to say that during the last few days aphid has made its appearance and in quantity, the points of the leading shoots being badly attacked. There are few better remedies than quassia, and to be effectual no time must be lost, as the fruits mature so quickly. Many of the insects may be removed by pinching off lateral or any growths not wanted for extension, dipping the points of the main shoots in a solution as advised and syringing over afterwards. Thinning in many cases would be advantageous to the crop even in the case of Morellos. The wood for next season must also receive attention, and in the case of dessert varieties strong growth laid in thinly will soon make fruiting wood. Crowded spurs or breastwood should be thinned out early to allow light and sun to reach the fruit; small weakly growths should be pinched to the second or third joint and will then make short spurs. In the case of the Morello sufficient young wood must be laid in each season, the crop being borne on the young wood of the previous season. Any foreright shoots may be cut back to three or four eyes; the lower buds will then make short spurs or fruiting wood, and the longer clean shoots should be laid in full length.

**APPLES AND PEARS.**—The growths of the former on walls will need thinning if grown for specially fine fruits, the breast-wood being kept cut away and the main shoots laid in position. Pears need more attention than Apples. In many places thinning of the fruit will be necessary. Pinching and training will likewise need attention. I do not advise too early pinching, as it induces a forest of spray, but when done in season it promotes a fruitful growth. Of course it is necessary to remove useless breast-wood, as such never produces fruit buds. Rainfall in this locality having been very slight, watering will soon be a necessity in the case of young or newly-planted trees, and a good mulch will do much to keep the trees in an active, healthy state. Few materials are more suitable than stable manure, which can be used in a fresh state. Should the short material be required, the long litter will be of great benefit, retaining moisture and preventing the water running away. Cow manure in a partially decayed state, mixed with strawy litter, is a splendid mulch and provides food at the same time. In thinning the fruit take into consideration the variety, if a large or small kind. In the case

of large fruits of the Pitmaston type thin to one fruit on each spur. Newly-planted trees on walls or in the open should not be allowed to carry a crop: the blooms and newly-set fruits should be removed. With young trees early mulching is important.

**STRAWBERRIES.**—Owing to the drought I have been compelled to water the early Strawberries, as the crop, being heavy, is in need of support. There is no better time than the present to feed Strawberries, and manure either in a liquid state or in the way of a rich fertiliser as guano, well washed down to the roots afterwards with clear water, may be given freely, and will help to swell the fruits. In watering with liquid manure care should be taken to place it close to the roots, and it is much better to give a thorough soaking once a week, as merely damping the surface does little good. Late-planted Strawberries for next season's fruiting should have all flower-trusses removed as they show, also runners, and if possible be mulched with some spent manure.

G. WYTHES.

### KITCHEN GARDEN.

**EARTHING UP POTATOES.**—Batches of second early Potatoes in gardens which have not yet been earthed up should be attended to at once, and as these will have been allowed more room between the rows than the earlier short Ashleaf varieties, there will be less danger of mutilating the young rootlets with the hoe. Use moderation in earthing, as a large mound of soil only impedes the action of warmth and air and causes the tops to ripen prematurely, to say nothing of the extra labour incurred. If it is now seen that any other varieties have by accident found their way into the rows, they should be drawn out—that is to say, if any of the smaller tubers are to be saved for seed. Any rows not so far advanced may be left for another ten days before being earthed up, as it is an evil to partly bury them when insufficiently grown.

**SUMMER TURNIPS.**—The sowings of Early Milan advised in previous calendars may now be followed by sowing Snowball, Veitch's Red Globe, and for those who prefer a yellow-fleshed Turnip, Orange Jelly will be found most satisfactory. Where room is plentiful I would recommend that all the above sorts be included in this sowing, as then more of a succession will be secured; and as one is never sure about Turnips running to seed in a young state, greater security is given by such a course. Avoid south or even any extra sunny borders now, and for the rest of the season choose rather an east or north border, the same being extra well prepared by the incorporation of some rich manure, the ground being deeply tilled and firmly trodden unless heavy naturally. As before stated, manure from fowl houses is excellent for Turnips, provided always it has been well dried and powdered previously. It is bad practice to use it in a wet, raw state, especially near the surface. If in addition to that dug in a coating of it in powdered form mixed with half the quantity of soot is applied to the surface as soon as the crop is thinned, it will aid in warding off the dreaded fly, which is often most troublesome to Turnips sown now. Take care to thin early, as when left crowded they get drawn, and the base of the bulb becoming exposed, they never do so well. From 1 foot to 15 inches apart is not too much for summer crops of the more robust growing varieties. Dusting overhead immediately thinning has been completed with wood ashes will often prevent the fly from attacking the tender seedlings, and if this can be done they soon grow out of harm's way.

**BRUSSELS SPROUTS—MAIN CROP.**—The few rows of extra early plants for a supply in September and October planted some time ago are now growing away fast, the screens having been taken away, as they are now able to take care of themselves. The main batch for November and December may now be got out as soon as possible. Draw out fairly deep drills on medium and light

soils, reducing their depth, or even planting on the level where the situation is low or the soil very retentive, plant carefully with a trowel in preference to a dibber, and water home. If the weather continue dry, the watering may be repeated in ten days' time. Where an extra sowing for later work has not been made, the smaller plants from the main-crop beds may be pricked out on to a bed of rich soil in any convenient spot, and planted three weeks hence for supplying useful sprouts during the early spring months.

**UTILISING CELERY RIDGES.**—In most gardens these will all now be prepared. It is a great gain to get the trenches thrown out in good time, as the ridges can be utilised for such quick-growing crops as Lettuce, Spinach, and the dwarf early hearting kinds of Cabbage where room is scarce. I have on Celery ridges often grown Walcheren Cauliflower for cutting in August. Whatever is planted on the ridges must be well looked after as regards water. I sometimes sow Lettuces on the ridges, and thin the seedlings out to a growing distance, thus saving the labour of transplanting. Especially is this an advantage in hot weather when transplanted crops need so much artificial watering. Thinning out must, however, in such cases be done at a very early stage.

**SUCCESSIONAL CAULIFLOWERS.**—When once the autumn-planted hard-light batches of this vegetable commence to turn in they generally do so with a glut, although some varieties are certainly better for coming on gradually than others. I find Walcheren unsurpassed for turning in piecemeal, even better than the small forcing kinds which are now so largely grown. The spring batches planted out from frames or raised in heat in January and the early part of February will also be close on the heels of the above named, so that where a constant succession of Cauliflowers is required frequent sowings will be imperative. Pearl and Walcheren, recommended to be sown in March along with the first batch of winter stuff, will now be quite ready for transplanting. If on the dry side, soak the drills the night previous to planting. Sow also now the same two sorts in a cool place for following those just planted. If the two sorts are sown together, one is more certain of success, and if both do well a succession is ensured.

**AUTUMN GIANT CAULIFLOWER.**—I recommended a little seed of this popular Cauliflower to be sown in March, and where this was done the plants will be fit for putting out on the final quarters. Any of the smaller seedlings may be pricked out on to a bed well enriched with manure, planting these out in three weeks' time. If a little seed was also sown in April, the plants will be useful for putting out in June for carrying on the supply right on to the frosty weather, the plants being laid where frost will not reach them. Autumn Giant being a robust grower, thorough preparation of the ground is necessary. Plenty of room must be given, and if shallow trenches can be taken out, so much the better, as then feeding to any extent can be more easily performed. J. CRAWFORD.

**The Temple Chrysanthemums.**—I have only just seen THE GARDEN for May 18, in which a notice appears, stating that in future the annual exhibitions of Chrysanthemums in the Temple Gardens will be discontinued. These exhibitions have now been held for so many years, and in the early days did so much to popularise the flower, that I am sure I only echo the feelings of many a lover of this famous autumn favourite in expressing regret that such a determination should have been come to. Some years have elapsed since the Chrysanthemum show in the Middle Temple Gardens was abolished, and now it appears that the Inner Temple authorities intend to do likewise. It would be interesting to know exactly how many years Chrysanthemums have been grown and exhibited in the Temple; it must be at least forty, if not more. Mr. Samuel Broome published the first edition of his "Culture of the Chrysanthemum as practised in the Temple Gardens" in 1857, and had then been in the posi-

tion of gardener there for twenty-five years. But he does not tell us how long out of that time he had been growing and showing the Chrysanthemum to the public. In a list of varieties at the end of that work, comprising large-flowered, large Anemones, Pompons and Pompon Anemones, which number about 340 varieties and which were then in cultivation by Mr. Broome, a few are still, or were recently grown by cultivators of the present day. In particular may be mentioned Aimée Ferrière, Alfred Salter, Annie Salter, Beauty, Chevalier Domage, Christine, Cloth of Gold, Golden Queen of England, Leon Leguay, Nonpareil, Phidias, Queen of England, Temple of Solomon, Fleur de Marie, Georges Sand, Chick, King of Anemones, &c.—CHRYSANTH.

## STOVE AND GREENHOUSE.

### CYCLAMEN CULTURE.

This popular and most useful winter-flowering plant is very often indifferently grown. The most fertile causes of failure are over-potting, insufficient drainage, a non-porous soil, cold draughts, exposure of the foliage to the sun or allowing it to become infested with thrips. Although I cannot claim to have had an unchequered success in growing Cyclamens, yet as my plants generally do well, a few notes as to the mode of treatment may prove useful. I may here say that I do not rely upon old bulbs, as I have never had much success with these. I raise a fresh batch of seedlings every autumn, casting the same away after flowering is over. I sow the seed in August in pans, using a compost of light fibrous loam, passed through not too fine a sieve, to which is added one-fourth of leaf-mould quite free from pieces of wood. This freedom is very essential, as the sticks often engender fungus, which is ruinous to the roots of the Cyclamen. Sufficient silver sand to keep the compost open is likewise added. This is pressed firmly into the pans, which are well drained, and the seed after being sown on a level surface is nicely covered with the compost, this again being made firm. The pans are then placed either in the Cucumber house or Pine stove on a warm moist bottom, not necessarily near the glass, and shaded until the seedlings appear. Great care is needed in moistening the soil, also much patience, as germination is sometimes very slow. By the time the plants are up the weather has become much cooler and the pan is elevated close to the roof glass and no shading used. Through November, December and January from 55° to 60° is the average heat during the night which suits the plants and induces a free and healthy growth. About the middle of February potting is performed, using the same compost as before, only in a much rougher state, placing each bulb in a 3-inch pot and allowing it to remain partly above the soil. Some advocate burying it, but the plan is ruinous, as the least excess of water is apt to rot the young leaves issuing from the crown.

Potting completed, the plants are elevated as before on slates surfaced with Moss, this material holding the moisture about the pots. Shading is necessary for ten days, and gentle syringings each morning and afternoon. In watering, the spout of the can should be placed close to the rims of the pots, as if held aloof and the water dashed into the soil, the plants soon become sickly. Of the two evils, over-dryness and over-wetness, the former is the safer at this stage. The plants being subject to thrips, a slight fumigation generally is advisable as a preventive, as this pest soon plays

sad havoc with Cyclamens. Towards the end of March, the Pine stove or Cucumber house becoming too hot for their welfare, they are removed into a span-roofed Peach house and arranged on a brick slab, partially shaded by the foliage of the Peach trees, the night temperature being about 55°, rising considerably from sun heat, especially when closed early in the afternoon. By the beginning of May the small pots are filled with roots and the plants are removed into their flowering pots, these being 4½ inches in diameter. Firm, but not hard potting is necessary. The plants, standing on a brick kerb of the Peach border, are a good distance from the ventilators, and thus escape draught, which soon distresses the foliage and checks the plants. By the middle of August, the Peach house having to be thrown open day and night—the fruit being ripe—the Cyclamens are removed to a frame and stood on a hard ash bottom, the glass being slightly shaded with whitening until September, when it is removed and the plants entirely exposed to the sun. I do not care for the plan of keeping the lights tilted up all night, but close them about 4 p.m., slightly syringing the foliage. At the commencement of October the plants are removed to a light greenhouse, placed near the glass, and when the blooms are throwing up, a little stimulant is given, weak farmyard liquid being the best. Until this date I am opposed to giving manure water, as the roots of Cyclamens are very delicate and easily injured.

J. CRAWFORD.

**Iris hispanica in pots.**—It is a wonder this pretty Iris is not more generally cultivated in pots, as the flowers are valuable just now for cutting. I usually order the bulbs in August, and as soon as they come to hand I place five in a 4½-inch pot in a mixture of loam, leaf-soil and sand, and stand in a Carnation house or cool greenhouse. If the soil is in a moist state when potting do not give any water until signs of growth appear. If carefully watered through the winter the bulbs will make strong growth and throw up a flower-spike towards the end of April. If wanted in bloom earlier they will not resent a gentle forcing.—F. C.

**Boronia serrulata.**—Two or three years ago this Boronia was very difficult to obtain, but a group of healthy little specimens profusely laden with bloom at the recent Temple show showed that the exhibitors (Messrs. Balchin, of Hassocks) are as successful in the culture of this as in the case of the blue Leschenaultia. Boronia serrulata is of rather low growth, the slender and somewhat spreading shoots being clothed with curious trapeziform leaves serrated in front. The flowers, which are borne in great profusion, are of a pleasing shade of bright rose. This Boronia, which is a native of New South Wales, was introduced into this country in 1816. Taken altogether, the Boronias are certainly a very pleasing class of plants whose flowering season is spread over a lengthened period, for quite early in the year the sober-tinted, but deliciously fragrant blossoms of *B. megastigma* fill the greenhouse with their perfume; after which comes the newer *B. heterophylla*, whose rosy carmine coloured blossoms are borne in such profusion, that the entire plant is quite a mass of flower. If the foliage of this is agitated, the scent therefrom is decidedly unpleasant. The pink blossoms of *B. pinnata* are very pretty, but they are rarely seen. *B. elatior* is a decidedly ornamental member of the genus and one of the latest to flower, in addition to which it is more easily grown than some of them. It forms a freely-branched bush somewhat upright in habit, clothed with bright green pinnate leaves, and with drooping rosy red flowers. All the Boronias, being natives of Australia, require greenhouse treatment and a soil principally composed of sandy peat, to which some cultivators add a little fibrous loam. Thorough drainage is

essential, and, in common with most other hard-wooded plants, the watering needs to be carefully done. Cuttings are not at all difficult to root, but especial pains are needed to ensure a good bushy style of growth, for unless care is taken in this respect the young plants are very apt to run up thin and naked at the base, particularly *B. elatior* and *B. megastigma*. To counteract this tendency as far as possible, the young plants must be stopped freely during their earlier stages, and a free circulation of air is essential.—T.

**Correa cardinalis.**—Among the hard-wooded subjects known generally as New Holland plants that are flowering just now this *Correa* is particularly noticeable, as the blossoms are not only brighter in colour, but in other respects it differs widely from any of its associates. It is a plant that many fail to grow in a satisfactory manner, yet in Messrs. Low's nursery at the present time numerous little bushes in pots only 5 inches in diameter, and profusely laden with bloom, are now at their best. This *Correa* needs a soil principally composed of peat and sand, to which a little good loam may with advantage in some cases be added. To encourage a bushy habit of growth it needs to be stopped freely during its earlier stages. The flower of this is tubular, a little more than an inch in length, and of a bright scarlet colour tipped with green. There are certainly signs that the old-fashioned hard-wooded plants are slowly becoming more popular.—H. P.

**Market Heaths.**—Although Cape Heaths, especially those that bloom at this season of the year, are but little grown in private gardens at the present time, some have remained in favour as market plants. Prominent among them is *Cavendishi*, one of the finest spring-flowering plants in cultivation. Very nicely grown little specimens of it in 4½-inch and 6-inch pots are being offered in Covent Garden. The charming little *ventricosa coccinea* minor is also a favourite. It is wonderfully free-flowering, very compact in growth, and one of the neatest-habited members of the family. *Ventricosa superba* and *grandiflora* are also grown to a limited extent, and *perspicua nana* is still in favour. Another favourite kind is *candidissima*, an effective white-flowered *Erica* now coming into bloom. It is of easier culture than the preceding, and does not require so long a period to bring to marketable dimensions.—J. C. B.

#### BLANDFORDIAS.

I SUCCEED best with the different *Blandfordias* when grown in a mixture of peat and loam, with a liberal amount of silver sand. They are grown in a greenhouse just shaded during the hottest part of the day, and at no period of the year are they allowed to become dry; indeed they get pretty much the same treatment as a *Pelargonium*. By far the freest grower is *B. nobilis*, shown on the upper part of the coloured plate in the issue of May 18, and the roots of this being of a more fibrous nature than those of the *flammea* section, it can be increased far more readily by means of division, for the larger flowered forms, and especially princeps, need particular care to be taken in dividing an established plant. *B. nobilis* can be depended upon to flower well year after year, and as a rule the blossoms of this are the first to expand of the different species. A very suitable time for repotting or for dividing the plants if it is intended to do so is directly after flowering, for there is then ample time for them to become established before winter sets in. In dividing the thick fleshy-rooted forms such as princeps a good plan is to wash away the whole of the soil from the roots, so that they are not bruised in any way, as the least injury will often cause the entire root to decay. The dividing should be done with a sharp knife, as the two or more shoots are often at the base so close to each other, that without great care one or the other is very liable to be taken off without its due proportion of roots. In repotting these that have had all the soil washed off a very good plan is to sprinkle silver sand around the cut portion and in immediate contact with the roots. When

either established or divided plants are potted, thorough drainage should be given them, for while they are at all times impatient of stagnant moisture, yet they need a liberal supply of water during the growing season. It is a good plan to keep divided plants rather closer until the roots take hold of the new soil. Seeds are readily produced, especially if the precaution is taken to fertilise the flowers, but this should not be done unless the seeds are actually needed, as the production of seed weakens the plant very much more than if the spike were cut off directly the flowers decay. The thick wax-like texture of these *Blandfordia* flowers is a great point in their favour, for they remain fresh and bright a considerable time. Some of these *Blandfordias* are difficult to obtain from nurseries and high prices are charged for them, but one of our principal Orchid dealers who has lately devoted some attention to new and uncommon plants announces *B. grandiflora* at the relatively low price of half-a-crown. This species is unknown to me, but it is, I see, described in the "Dictionary of Gardening" as having been introduced in 1812. T.

**Staking plants.**—Though a very simple operation, this is frequently carried out in a most unsatisfactory manner, and many instances have come under my notice of late in which plants have been greatly damaged by negligent staking. These remarks do not refer to the training of specimens, but the plants in which a single stick is employed just to keep them in position. The great error that is made by many is to insert the stick but a short distance in the soil, hence the plant will in many cases have to support the stick after a time. When plants are sent from a distance this style of staking is often liable to cause great injury to them, and I have had ample opportunity of seeing the ill-effects of this in the case of many plants from different sources and sent from various parts of the country. One very pronounced case was a quantity of flowering *Carnations* in 5-inch pots, whose heavy sticks from an insufficient hold of the soil had swayed about and greatly injured many of the plants. On the other hand, a greater number sent from a long distance travelled well, each stick being inserted right to the bottom of the pot, and consequently all was made secure. By old-fashioned gardeners this was impressed upon the beginner as one of the most essential features in tying plants, but, judging by the instances that have of late come under my notice, this unsatisfactory way of staking plants seems greatly on the increase.—H. P.

#### NEW STOVE PLANTS AT THE TEMPLE SHOW.

To anyone familiar with the large masses of fine-foliaged new plants that were so prominent at the principal shows of the Royal Horticultural and Botanic Societies some fourteen years ago or more, the recent exhibition at the Temple Gardens afforded a good illustration of the vagaries of fashion, for the various *Dracenas*, *Crotons*, *Dieffenbachias*, *Aralias*, and such things were conspicuous only by their almost total absence; indeed, new stove plants of this class were contributed by only one exhibitor. Undoubtedly the best fine-foliaged stove plant was *Dracena Godsefiana*, which is totally distinct from anything else we have. Instead of one stout stem furnished regularly with foliage, thus forming a symmetrical-shaped specimen, this newer kind pushes up shoots from the base after the manner of a *Bamboo*. These shoots elongate and finally branch, thus forming a loose bush-like plant. The oval-shaped leaves, which are from 2 inches to 3 inches long, are of a deep rich green, freely spotted with creamy yellow. As far as I know there is only one other *Dracena* in this way, and that is *D. surculosa maculata*, which was introduced from Old Malabar in 1867. The leaves of this are more lanceolate in shape than those of *D. Godsefiana*, and the marking consists only of light green spots

on a dark green ground. A fine mass, too, was shown of *D. Sanderiana*, which, though not really new, is of recent introduction. This is a very pretty *Dracena*, the clear silvery variegation of which stands out very distinctly from the bright green of the rest of the leaf. The spread of the foliage is so limited that a single plant does not make much of a display, but a large mass composed of numerous stems, as shown at the Temple, forms a very striking feature. *Heliconia illustris rubricaulis*, represented by a fine specimen, has been before the public for two or three years, but it is still very scarce and commands a good price. It is the finest member of the genus, the marking being after the manner of the better-known *H. aureo striata*, but the colour is quite different. In *H. illustris rubricaulis* the ground colour of the leaf is green, with the prominent mid-rib of a beautiful shade of pink, while the veins are also marked in a similar manner. The leaf-stalks, too, are rich reddish pink. The general aspect of this *Heliconia* is that of a bold, yet somewhat dwarf-growing form of *Canna*. *Ludevica crenifolia*, a Palm-like subject allied to *Cyclanthus*, with dark green leathery leaves, is a bold decorative plant, while several forms of *Anthurium*, apparently hybrids of *A. Andreanum*, were very noticeable. The rich crimson spathes, combined with the large dark green leaves of *A. albanense*, were particularly striking. H. P.

#### BOOKS.

##### A HANDBOOK TO THE CARNIVORA.\*

IN this are comprised the members of the cat family, civets, and mongooses. It is perhaps the most interesting of the series known as "Allen's Naturalist's Library," being full of spirited accounts of the hunting of lions, tigers, and the larger and ferocious felidae. Graceful and agile, the "cat," using the term in the comprehensive sense in which it is here used, has but little in its tastes and habits to recommend it to the friendship of man, and, in fact, excepting the domesticated races, mankind could do very well without the cat tribe. In regard to external characteristics, it is perhaps not generally known that the whiskers, or vibrissae, are important organs of touch or perception. An exception to the long, cylindrical, and tapering tail of the tribe generally is found in the lion, as most observers will have probably noticed. All cats walk on their toes. The warmer parts of Asia and Africa are regarded as the headquarters of the cat family, although practically, with the exception of New Zealand, New Guinea (perhaps Celebes), the West Indian Islands (save Trinidad, regarded as part of South America), and the circum-polar regions, the distribution is cosmopolitan. In the present day Europe is fortunate in the possession of only three species—viz., the wild cat, the common lynx, and the Spanish lynx. Among other animals the nearest relations to the felidae are the civets. From a certain structural resemblance of the skull and teeth it is generally considered that the cats originated from carnivora more or less closely allied to the civets. The lion is distinguished from the majority of members of the tribe by its inability to climb. The carriage and appearance of the lion in its native haunts are said not to be imposing, and its character for magnanimity, if the term be allowed in this connection, has been doubted. The magnificence of its roar is generally conceded. In Africa lions associate in parties, comprising up to as many as ten, and a great hunter (Mr. Selous) has even seen as many as twenty-three in a party. The old idea of the lion being a clean and dainty feeder is not sustained, and it is said that it will scarcely

\* "A Handbook to the Carnivora." Part I. By Richard Lydekker, B.A., F.R.S. W. H. Allen and Co., Limited.

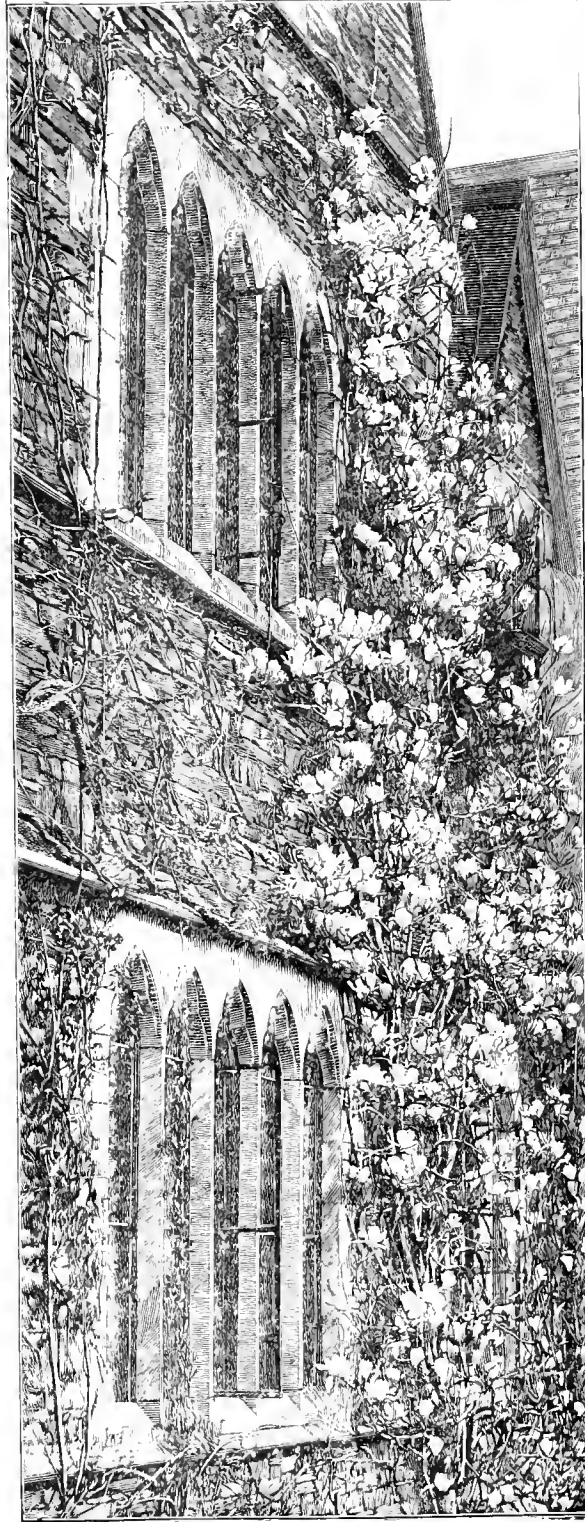
ever pass by the carcase of a slain animal, even though it be in an advanced state of decomposition, without stopping for a meal. Of the tiger very much has been written and said which will be found here also, but it is perhaps not generally known that at a pinch the tiger will make a meal off a snake. A tiger suddenly disturbed by a sportsman will avail itself of any loophole of escape, but—and this somewhat discounts the above statement—as the way the disturber has entered is usually the most obvious road of escape, the result is frequently disastrous to one or both. Tigers do not generally climb trees unless pressed by fear, but they have been known to clamber or even spring to a certain height where they have seen a man, and whence they thought the shot came, and pull him down. The muscular power of the tiger is enormous. The chapter on the tiger is most interesting. As regards the leopard, it is a desperate beast to hunt, as when wounded it will fight to the last, and on this account is regarded as even more dangerous than the lion. Unlike the lion and the tiger, it is essentially an arboreal animal. A favourite prey is the dog, and a traveller on a mountain path if accompanied by a dog may be surprised by the sudden dash of a leopard in pursuit of his canine companion. In India leopards not infrequently take to man-eating. The jaguar is a native of South America, as the puma is of the northern continent. Then amongst other wild things we have the marbled cat, the Tibetan tiger cat, the flat-headed cat of Borneo, the fishing cat of India, Ceylon, Burmah, South China, and thereabouts, remarkable from the great majority of its kindred by its habit of preying upon fish. In addition to fish it is known to feed largely on the large amphibious snails, known as ampullarie, which are met with in thousands in every marsh or "jhil" in Lower Bengal. How the succulent morsels are so deftly extracted from the somewhat hard shell is not known. The chapters on the ocelot of North and South America, the tiger cat of Mexico and Paraguay, the weasel-like cyra of Brazil, Guiana and Paraguay, and the Caffre cat of Africa from Egypt and Algeria to the Cape are full of interest, and with the last-named species we are brought to the cats of the Old World, beginning with the domestic cat, of which we know much less than we imagine we do, as the book clearly shows.

With regard to the introduction of domestic cats into Europe there is a considerable amount of uncertainty, and it has been asserted that the so-called cat of the ancient Greeks was really the marten. That the cat was domesticated in Europe before the Christian era, we have it on the authority of Professor Mivart. Great value was set on the cat. Towards the end of the sixth century, as is shown by the fact that in many European countries, including Wales, cat-killers were punished with what was no doubt to some a heavy fine—*i.e.*, the delinquent was required to cover the body of the animal with wheat, the tail being held up vertically, with the cat's muzzle resting on the ground. According to Jardine, no animal so soon loses its cultivation as the domestic cat and returns apparently to a state nearly wild. Then follow some curious cat stories. Cat skins are of considerable commercial importance, and the fur, which is stated to be one of the warmest, is extensively used for coat-linings, muffs, trimmings, rugs, &c. Black skins are the most valuable, and of these the best come from Holland; the very best Dutch pelts sometimes command as much as from six to eight shillings each. As is well known, the fur of the cat when rubbed is highly electrical, giving off sparks which in a dark room are easily visible. The wild cat of Europe and Northern Asia, the Pampas cat of South America, the jungle cat of India, the caracal of Africa and Asia, the Canadian lynx and the lynx family generally, with the hunting leopard of India, are all the subject of interesting chapters in this part 1, which also includes the civets and the mungoses, with some account of extinct cats. It is a work of great value and interest in a handy form. Like the rest of the series, it is full of coloured illustrations.

## TREES AND SHRUBS.

### MAGNOLIA CONSPICUA ON A HOUSE.

This fine-flowering tree of the early spring is not often seen growing on walls, but that it



The Yulan (*Magnolia conspicua*) on a house front.

may be successfully grown and flowered in this way is well shown by the accompanying engraving of a large plant in abundant blossom. *M. Soulangeana* we have also seen grown in

this way. One fine specimen on a Sussex house, having reached the top, was a glorious picture in flower, and hardly less beautiful in luxuriant leafage throughout the summer and autumn. In low-lying or unfavourable districts where late frosts are apt to occur and mar the beauty of these fine Magnolias when they are flowering, there are good reasons for giving them the benefit of wall shelter, as it may be the result of ensuring their successful blooming safe from risk of injury. Judging, too, from specimens that flower freely in the vicinity of London, such as at Gunnersbury and Syon, owners of suburban gardens who have insufficient room for planting this tree in the open might with advantage grow it against their houses. We should like to see it as popular as the *Wistaria*, which lately was flowering freely in scores of suburban gardens.

### Azalea Anthony Koster.

When this was first shown at the meeting of the Royal Horticultural Society on April 11, 1893, it received a first-class certificate and was noted in *THE GARDEN* as "one of the finest things of the meeting." After a lapse of two years this opinion is not likely to be disputed, for it has turned out to be a most beautiful Azalea, and was very conspicuous among Messrs. Veitch's exhibits at the recent Temple show. It is certainly a very fine form of *A. mollis*, having the sturdy, free-flowering character common to that kind. The flowers are large and the petals unusually broad, while their colour is very pleasing, being a brilliant orange-yellow with just a suspicion of a rose shade. It is certainly a grand Azalea either for flowering under glass or as a shrub in the open ground, where it blooms rather earlier than the bulk of the Ghent Azaleas. *A. Anthony Koster* has been spoken of as a hybrid between *A. mollis* and *A. sinensis*, but these two are usually regarded as synonymous. At all events, it is a grand garden form, and where it is intended to plant a number of hardy Azaleas this variety should be made a note of.—T.

**Tulip trees.**—Almost the only deciduous tree—so far as I have yet seen—appreciably injured by frost during the winter is the Tulip tree. There is a very lofty one, probably some 60 feet to 70 feet high, perhaps more—for it towers up above all surrounding trees in the grounds of Canbury Lodge, Kingston—which I have watched for some time past, as a long time elapsed after the usual period of foliage ere it put forth any leafage. Even now (the end of May) it has but a very miserable leaf covering; indeed, I should think two-thirds of the branches are dead. The case is not singular, as even on sand at Reigate and in a sheltered place (Woodhatch) I noticed the other day that a large Tulip tree was fully two-thirds killed. It would be interesting to learn how far other Tulip trees have been affected.—A. D.

**Xanthoceras sorbifolia.**—Although more than twenty years have passed since this plant first became known, it still remains one of the rarest of our hardy shrubs. If any doubts pre-



viously existed as to its hardiness in the neighbourhood of London at any rate, the fact of its having passed through such a winter as the past one without any injury should set them at rest. At Kew, where it is grown against a wall and also in the open without protection, it is in each case in flower. Its beauty, however, is greater in the more exposed position, the flowers being more abundant, and the handsome foliage and habit of the plant being seen to better advantage than when cramped against a wall. It is a native of North China, and its first introduction to Europe in 1868 has to be credited to the Abbé David, a name which has since become associated with the discovery and introduction of numerous Chinese plants. It is a shrub (ultimately a small tree) belonging to the Horse Chestnut family, and has handsome pinnate foliage of a bright glossy green. The leaflets are seven or nine in number, and have serrated margins. The flowers are densely packed in short racemes, 4 inches to 6 inches long, produced from the terminal buds of last year's growth. The flower is a little over 1 inch in diameter, the petals white, with a brownish red patch at the base. The species is one to be recommended to all lovers of spring flowering trees and shrubs. The generic name refers to the five yellow horn-like glands at the base of the petals.—B.

**Rhododendron blandfordiæflorum.**—This is one of the few Himalayan Rhododendrons that can be called really hardy in the home counties. Although a very distinct species compared with the common type of Rhododendron, it has not been looked upon generally as one of much value horticulturally, and it is not until one sees it growing and flowering as it does in Sir Edmund Loder's garden at Leonardslee, near Horsham, and in the neighbouring garden of Mr. F. D. Godman, that its beauty and really effective character can be fully learnt. At Mr. Godman's there is a specimen about 8 feet high and 6 feet through which a short time ago was simply covered with flowers; this is probably one of the finest specimens grown out-of-doors in this country excepting, of course, in the far south and west. The flowers as a rule are of a somewhat dull orange or cinnabar-red, and longer in proportion to their width than the flowers of ordinary Rhododendrons are. Their shape and size as well as their usually semi-drooping position render them comparable to a Lapageria. In Sir Ed. Loder's garden there is a remarkable variety in which the inside of the flower is quite a rich crimson. Two other species, Roylei and cinnabarinum, are very closely allied to this; no clearly defined lines of distinction can, in fact, be found to separate them, hence they are sunk under one name in the "Flora of British India."—W. J. B.

TREES AND SHRUBS IN IRELAND.

It has been suggested that it would be of interest to lovers of plants that some record should be kept of the effects of the unusually severe frost of last winter, and as we grow about 1100 different varieties of more or less rare plants in the gardens here, I have ventured to send you a list showing the casualties, the slightly injured and the uninjured. Among the first are several which, unfortunately, were moved just before the frost and snow set in, and it is, perhaps, hardly fair to count them among the dead, but I thought it best to give a statement of the whole.

When we read of the common Laurel having been killed in various parts of England, some people may be surprised at the number of rare and half-hardy things which have survived here, but the reason, I believe, is that the gardens lie on the slope of a hill, are well sheltered by old trees, and that the prevailing wind passes over the heads of the shrubs. In the list of survivals I have not mentioned the commoner sorts. Tea Roses have not suffered in the least, and out of some 700 plants of Pampas

Grass, about two dozen have been killed. Out of 160 varieties of conifers, the following were more or less injured: Cupressus Lawsoniana albo-spica, C. erecta viridis, C. pyramidalis argentea, C. macrocarpa, Juniperus virginiana albo-spica, P. insignis, Podocarpus andina, Sequoia sempervirens, Sequoia albo-spica, Glyptostrobus heterophyllus. This is a bad season for Rhododendrons blooming, but of Himalayan kinds, R. barbatum, R. ciliatum, R. campanulatum, R. fulgens, R. Thomsoni, R. Aucklandi, R. calophyllum, and R. niveum have flowered freely.

SHRUBS UNINJURED.

- Abelia floribunda serrata
- Acanthopanax ricinifolia
- Aciphylla Colensoi squarrosa
- Actinidia argentea Kolomikta volubilis
- Adenocarpus decorticans
- Ailantus glandulosa
- Akebia quinata
- Amorpha fruticosa
- Arbutus Rollissoni
- Aristolochia altissima
- Sipho
- Asimina triloba
- Astragalus tragacantha
- Atriplex Nuttalli Halimus
- Azara Gillesi integrifolia microphylla
- Baccharis patagonica
- Bambusa (12 varieties, all perfectly hardy)
- Benthamia fragifera
- Berberis aristata buxifolia congestifolia
- Darwini dulcis
- Jamesoni nepalensis
- Newberti stenophylla
- Thunbergi
- Bignonia grandiflora speciosa
- Broussonetia Kämpferi
- Buddleia Lindleyana
- Casalpinia japonica
- Camellias, sorts
- Caragana Chamlagu frutescens
- Carmichaelia flagelliformis
- Caryopteris mastacanthus
- Cassinia fulvida
- Cedrela sinensis
- Celastrus scandens
- Circidophyllum japonicum
- Chamerops humilis
- Choisy ternata
- Cinnamomum sericeum
- Cladrastis amurensis
- Clerodendron trichotomum
- Cleyera japonica
- Cordyline Banksi indivisa
- Coriaria myrtifolia
- Crinodendron Hookeri
- Cunninghamia sinensis
- Cytisus capitatus
- Daphne Blagayana encorum
- Fioniana Mazelli
- Daphniphyllum glaucescens
- jessoense
- Desfontainea Hookeri spinosa
- Desmodium pendulifolium
- Drimys aromatica
- Wintersi
- Elcagnus aurea marginata
- edulis
- Embothrium coccineum (against a wall)
- Ephedra altissima
- Eriobotrya japonica
- Escallonia Phillipiana pterocladon
- Eucalyptus coccifera cornigera umigera
- Encryphia pinnatifolia
- Eurybia erubescens purpurea
- Fabiana imbricata
- Garrya elliptica
- Genista atnensis Andreana sagittalis
- Glyptostrobus pendula
- Grevillea rosmarinifolia
- Griselinia littoralis lucida
- Halimodendron argenteum
- Hartogia capensis
- Hedysarum multijugum
- Hymenanchera crassifolia
- Idesia polycarpa
- Indigofera floribunda Gerardiana alba
- Kadsura japonica
- Kelreuteria paniculata
- Lagerstromia indica
- Lardizabala biternata
- Ilex latifolia
- Leptospermum bullatum kevigatum
- Limonia laurifolia
- Limoniastrum monopetalum
- Lindera obtusifolia
- Lomatia pinnatifolia
- Metrosideros floribunda robusta
- Mitraria coccinea
- Olea fragrans
- Olearia dentata Fosteri gummifera
- Haasti macrodonta nitida
- Osmanthus argenteus var. aureus var. ilicifolius myrtifolius
- Phillyrea decora
- Vilmoriniana
- Philodendron amurense
- Photinia serrulata
- Benthamiana
- Piptanthus nepalensis

- Pittosporum Colensoi coriaceum
- eriolomum lucidum
- Mayi undulatum
- Platyacarya japonica
- Quercus bambusae-folia Buergeri
- Rheum officinale
- Rhynchospermum japonicum variegatum
- Rubus japonicus odoratus
- Senecio compactus eleagnifolius
- Fosteri petasites
- Smilax aspera
- Smilax latifolia
- Stephanandra flexuosa
- Trachycarpus excelsus
- Veronica anomala Traversi
- Viburnum cassinioides macrocephalum nudam plicatum
- Tinus
- Weinmannia racemosa
- Xanthoceras sorbifolia
- Yucca aloifolia variegata filamentosa flexilis gloriosa recurva
- Treculeana Whipplei

SHRUBS INJURED.

- Abelia rupestris
- Agapanthus umbellatus albus
- Aloysia citriodora
- Anopterus glandulosa
- Aralia papyrifera
- Arbutus Menziesi
- Ardisia japonica
- Aristotelia racemosa
- Aster argophyllus
- Buddleia globosa
- Calceolaria violacea
- Callistemon coccineus spectabilis
- Carpenteria californica
- Ceanothus azureus divaricatus
- Gloire de Versailles
- Clethra arborea
- Colletia bictonensis cruciata
- Coprosma lucidum
- Corynocarpus levigatus
- Edwardsia microphylla grandiflora
- Elcagnus macrophylla
- Eryngium pandanifolium
- Escallonia Ingrami macrantha organensis
- Eucalyptus Gunni pilularis
- Eugenia apiculata myrtifolia
- Ugni
- Fontanesia phylliraoides
- Glyptostrobus heterophyllus
- Grevillea sulphurea
- Griselinia macrophylla
- Hakea crassifolia
- Laurus nobilis
- Libertia ixioides
- Maclura aurantiaca
- Meliosma pungens
- Mysine ilicifolia
- Myoporum sp.
- Myrtles
- Phormium tenax variegatum
- Phygelius capensis
- Pittosporum floribundum nigrescens
- Tobira
- Quercus cuspidata glabra
- Serissa foetida
- Veronica Andersoni
- Hulkeana decussata
- salicifolia selaginoides
- Viburnum Awafuki

SHRUBS KILLED.

- Acacia melanoxylon undulata
- Billardiera longifolia
- Bucklandia populnea
- Cassia coquimbensis
- Chironia diantha-folia
- Correa viridis
- Corypha australis
- Dicksonia antarctica
- Diosma gracilis
- Epigynum leucobotrys
- Escallonia coquimbensis montevidensis
- Eucalyptus cordata obliqua
- piperita
- rostrata
- Eupatorium riparium
- Greyia Sutherlandi
- Macadamia ternifolia
- Ozothamnus rosmarinifolius
- Pittosporum eugenioides
- Plumbago capensis
- Raphiolepis glabra ovata
- Rhodomyrtus tomentosa
- Rubus australis phonicolasius
- Solanum jasminoides
- Sollya heterophylla
- Tecoma jasminoides
- Thea assamica
- Bohea

J. RYAN.

The Gardens, Castlewellan, Co. Down.

**Rose Perle des Jardins.**—No yellow Rose can equal this for consistency of form, and no other kind is so continuous in its flowering. Well managed plants commencing to open their blooms in March continue to give a succession of neatly-formed flowers especially suitable for making into button-hole bouquets, &c. Mr. Axford, near Eastleigh, is a large grower of this Rose, house after house being devoted to this variety. In fact, with the exception of a batch of Catherine Mermet and some dozen or so plants of Marchal Niel, Perle des Jardins is the only Rose grown. Numerous

span-roofed houses have been built for its accommodation, each containing about three hundred plants. The plants are all grown in 7-inch and 8-inch pots, stood upon side beds of a sandy loam in rows of four plants on each side of a central pathway. The roots run through the bottom of the pots into the soil, where of course they receive much support. The pots, however, check the luxuriant growth that might otherwise be troublesome if they were planted out. Some of the plants have not been repotted or disturbed for five years. I never saw such healthy foliage. The great point which Mr. Axford observes is never to allow the air to become chilled during the night, that, he finds, being the greatest source of mildew. Every night the hot-water pipes are warmed about ten o'clock so as to maintain an equable temperature throughout the night. This practice is carried out all through the summer months, and apparently with excellent results. The plants obtain very little artificial aid; an occasional dose of liquid manure from the stable tank is all that is necessary. The plants are all grafted on the seedling Brier. Capital growth is made the first year, this being several times pinched back to lay the foundation of the future bush. The plants are hard pruned during the winter or early spring, according to the time they are required to bloom.—E. M.

### WOODLAND PATHS.

THERE is no lack of admirers of glowing beds of colour, of blossoming climber and of trim parterre, but it is seldom that the horticulturist waxes eloquent over the beauties of shady woodland ways: yet these often possess unostentatious attractions that are found wanting in the more emphatic charms of the flower garden. Very restful to the senses are those wood-paths that have been left by their originator Man to the predominant partner Nature to fashion and decorate after her own manner. She festoons with Honeysuckle, Eglantine and Bryony the boughs on which the glints of sunlight fall. In the shade she weaves the Ivy wreath. On either side the path she plants Ferns; in the lower lands the graceful Lady Fern; in the higher, the Bracken and Blechnum; while in the Fir plantations that clothe the river banks on the fringe of the moor, great fronds full 4 feet high of the Royal Fern (*Osmunda regalis*) shoot up from the peaty soil.

It is such a path, where Nature has been left undisturbed, that the illustration depicts. In the spring the wild Hyacinths and Primroses mingle their blue and yellow with the young green of the Ferns. The white-throats and blackcap warblers build hard by in the undergrowth of Hazel wands and ground Ash. The squirrel, leisurely approaching up the middle of the track, stops suddenly and, motionless, with tufted ears pricked, eyes the intruder for a good half minute until some movement of hand or foot sends him flying to the refuge of the overhanging boughs.

A blue flash through the greenery, the kingfisher threads the leafy alley on his way from the lake above, where in summer evenings the Loch Leven troutlets leap beneath the shade of the Alders, to the little stream that meanders down the valley below.

At high noon, when in the open the atmosphere palpitates with heat, the wood-way lies cool and still, the shifting rays of sunlight that filter through the Beech leaves tessellating its green carpet with an ever-varying mosaic of light and shade.

In the gloaming the fronds of the Lady Fern move aside as the young rabbits come out to play on the open spaces of the path, and in the mysterious glimmer that comes between the twilight and the dark, the white owls call

to one another from the outlying trees, while ever and anon, on silent pinions, a ghost-like form sweeps noiselessly through the dim aisles, and the dew-laden air is full of the indefinable scents of the woods. S. W. F.

### THE MARKET GARDEN.

(Continued from page 332.)

#### CUCUMBERS AND GHERKINS.

THESE are largely grown in the fields in the neighbourhood of Paris, and there is no reason

inevitably always some which are a good deal larger than this; these, however, are also utilised by the pickle-makers for another class of their products, but the more uniformly the Gherkins are of the smaller size, the better the prices which they command. Not picked, but as they are ordinarily sent to the Halle market, they fetch from 8s. 4d. to 16s. 8d. per cwt., but the small-sized pickled Gherkins will sell for 25s. per cwt. An acre of ground would produce Gherkins to the value of £32, but they are rarely grown by individual cultivators on so large a scale as this, on account of the great expense which the gathering of such an extensive crop would entail.

#### SPINACH AND SORREL.

It is not very long since Spinach and Sorrel were introduced as a catch crop in field culture in the neighbourhood of Paris, where they are generally grown on lightly-broken-up Corn stubbles. The seed is usually sown broadcast, and but little further trouble or attention is required. Some cultivators sow in drills and thin the plants out to ensure a more regular and equable growth, and they are amply repaid by having a heavier crop in consequence.

The gathering of the leaves commences in September and October and is continued throughout the winter whenever a thaw takes place. The yield is largest in spring before the plants come into flower. According to the season a hundred-weight of Spinach leaves will fetch from 6s. 3d. to 16s. 8d. in the market.

The varieties most suitable for field culture are:

1. EPINARD MONSTRUEUX DE VINCENNES, which has exceedingly large leaves.
2. EPINARD A FEUILLES DE LAITUE, the leaves of which are closely set, roundish oval in shape and very green.

3. EPINARD LENTA MONTER, which in spring continues in full bearing for

about three weeks after the other kinds have come into flower.

It has been observed that Spinach, belonging to the natural family of the Chenopodiaceae, does badly if sown in ground from which a crop of Beetroot (which belongs to the same family) has last been taken, and this is one of the reasons why it is recommended to sow Spinach on a Corn stubble.

Sorrel is frequently grown in the same way, but being a perennial lasts longer in the ground. At Varedes, not far from Paris, a very well-managed and prosperous branch of industry in connection with this plant is carried on by M. Clairet, in whose establishment the Sorrel leaves are boiled and made into a paste, which is sent out in boxes or barrels very ingeniously contrived so as to prevent the paste from drying



A woodland walk. Engraved for THE GARDEN from a photograph sent by Mr. S. W. Fitzherbert, Torquay.

why they should not also be grown in this way in any locality where a pickle factory can be established.

The seed is sown about the beginning of May, when the ground has become warm, in pockets, which are made in the soil in lines about 6½ feet apart. Usually some other kind of vegetable, most frequently Haricot Beans which are to be gathered green, is grown in the intervals between the lines of pockets. The crop commences to come in in July, and is produced continuously until September. The variety which is grown in the fields is the Cornichon vert de Paris, the fruit of which is spiny, very green, and continuously produced in almost inexhaustible abundance. The Gherkins are gathered when they are about the thickness of the little finger, but at every ensuing gathering there are

up and also to neutralise the corrosive action of the acid salt of the Sorrel upon the metal of which the boxes, &c., are made.

The best variety of Sorrel for field culture is the Oseille large de Belleville.

#### STRAWBERRIES.

The culture of the large-fruited kinds of Strawberries should be placed almost on the same footing as that of Asparagus, if it is to be carried out with the justice which is due to it. The experience of forty years' successful culture testifies to the economic importance of this crop in the neighbourhood of large towns. Strawberries bear carriage badly, and it is more difficult to send them to any considerable distance in good condition than any other fruit which is grown in our climate; consequently a considerable preference for excellence is given to those Strawberries which are grown not far from the markets to which the fruit can be sent in a very short time without being exposed to the detrimental effects of very hot weather or of too much shaking and jolting on the journey. In the neighbourhood of Paris, the Strawberries which are grown for the Halle market are cultivated on the edges of valleys, on well-exposed slopes of rising ground, and (favourite position of all) on declivities from which trees and shrubs have been cleared off. The quantity of water in the annual rainfall is generally quite sufficient for the plants which are grown in this way, and they never receive any artificial watering. A plantation ordinarily lasts for three years, yielding half a crop in the first year and full crops in the two succeeding seasons. Planting is done either in April or September as weather or circumstances may permit, and after the third season's crop is gathered the plantation, being no longer sufficiently profitable, is rooted up. The good qualities which a variety of Strawberry should possess to recommend it to cultivators are many in number. In the first place, I may mention earliness in bearing, which ensures a high market price at the commencement of the season; then vigour of growth, maintaining an abundant production; colour in the fruit, which renders it more saleable; and as great a capacity as possible for bearing carriage without injury, so that it may be quite fresh when it reaches the market.

The following seven varieties are favourite ones with the growers in the neighbourhood of Paris, and can be recommended as well adapted for field culture:—

1. **FRAISE MARGUERITE** is highly esteemed for the earliness and large size of its fruit, which is rather pale in colour and deficient in quality, yet sells very well until the ordinary early kinds come to market.

2. **PRINCESSE ROYALE** is an old French variety, which is still highly thought of by the growers around Paris. It is very early, very productive, and highly coloured. The central part of the fruit is so solid and tough, that it is known at the Halle market as the "Fraise a noyau," or "Strawberry with a stone."

3. **DOCTEUR MORÈRE**.—An early, large and very productive kind, of excellent quality. The fruit is palish in colour and prone to grow hollow at the centre; nevertheless it is highly deserving of recommendation.

4. **VICOMTESSE HÉRICART DE THURY**, commonly abbreviated to "Ricart," is a very early kind with a fine colour and of exquisite flavour. This is by far the best variety of Strawberry for field culture. It has only one drawback, viz., that the fruit is rather small-sized, and now-a-days in the markets a fine appearance goes before excellence of quality.

5. **JUCUNDA**.—This is the most productive, the hardiest and the most vigorous-growing variety of all. It is not a very early-fruited kind, but

bears plentifully and for a long time, and the fruit is very fine-looking and well coloured.

6. **SIR JOSEPH PAXTON**.—This variety is beginning to be more extensively grown about Paris. It bears a superb, large, conical, well-shaped fruit with a magnificent colour. It is a very late kind, but is none the worse for that.

7. **BELLE DE COURS**.—This is in every respect one of the handsomest and best kinds of Strawberries, early and very productive. The fruit is long in shape and of a handsome deep colour, shining as if varnished and excellent for both quantity and quality.

When Strawberries are grown on a large scale for market it is advisable not to confine oneself to a single variety, but to divide the ground between two or three varieties which ripen at different periods. In this way the grower is not only secured from the risk of losing too much through the occurrence of unusually unfavourable weather, which might hit one variety very hard and do very little harm to the others, but he can also distribute the work of gathering the fruit over a longer period and profit by the generally higher market prices which prevail both at the commencement and at the end of the season.

#### HARICOTS OR KIDNEY BEANS.

With regard to the special subject of which I am treating, no other vegetable presents so much difficulty as Haricot Beans, on account of the great variety of ways in which they may be grown in different localities and sometimes in the same locality—hence a correspondingly large number of distinct varieties and of different modes of culture has to be taken into account. Requiring more heat than moisture and growing rapidly, Haricot Beans are easily grown as a summer crop, succeeding any other crop which is cleared off in spring (such as early Potatoes, Spinach, or Red Clover), and at the end of September leaving the ground free for the sowing of winter Corn.

From a cultural point of view, these Beans are divided into two classes, viz., the tall kinds, which require the support of stakes, &c., and the dwarf kinds, which are of low, tufty growth and need no stakes. It is of these dwarf kinds that I shall here treat in connection with field culture, as the taller-growing kinds, which require the support of stakes, come rather within the province of market gardening properly so termed.

In the matter of table use, these Beans are divided into the edible-podded (Haricots sans parchemin or mange-tout) and the tough-podded (Haricots à écosser or à parchemin). The pods of the first-named kind can be eaten as well as the seeds, whereas the pods of the last-named kind are only eaten in the young or green state, and the seeds or Beans are eaten both when freshly shelled and also in the dried state, in which latter condition they are most largely consumed. In most districts of France the crops of ripe Beans, which are grown amongst other crops, as in vineyards and Maize fields, are almost equal in quantity to the Corn crops, and form an important article of the public food supply, since the seeds of leguminous vegetables, and especially these Beans, are the least expensive of the substances which furnish the nitrogenous elements of food.

It is very difficult to say which varieties of Haricots are the best to grow for the ripe seeds, some being preferred by cultivators for one reason, and others for a different one, while the taste of the purchaser must also be taken into consideration, as it often counts for a good deal in the very different prices realised for two articles of equal intrinsic value, but of which one is in fashion while the other is not.

Generally speaking, the white-seeded kinds are always preferable, such as the White Flageolets à feuilles gaufrées and hâtif d'Etampes, which are of first-class quality, Haricot de Soissons nain, nain Bonnemain, and Haricot riz nain, or Comtesse d'Chambord. The Haricot suisse blanc (and especially the dwarf variety, which does not run at the top) and the Haricot sabre nain d'Hollande may also be confidently grown for a crop of dried Beans, which as long as they are in good condition will always find a purchaser.

The greenish seeded varieties, Chevrier, Merveille de France, Bagnolet vert, &c., are still more valuable than the white-seeded kinds; but in order to have them well coloured and very uniform in appearance, Nature must be in some degree assisted by the labour and skill of the cultivator. As soon as growth has ceased (which is easily known by the falling of the leaves), and while the pods are still fresh, the plants should be pulled up and placed in small heaps not quite so large as those into which mown Grass is first made up in hay-making. The leaves of the plants and, if necessary, a little straw are used to cover the heaps, in order that the pods may dry gradually, and to exclude light as much as possible. In about from ten to fifteen days, if the weather is favourable, the Beans will be well dried, and may be threshed out.

Amongst the coloured Beans which are in demand for table use, I must mention the Haricot Flageolet rouge or rognon de coq, which is long and cylindrical in shape, very glistening in appearance, and always high in price, and the Haricots nains de Chartres and d'Orléans, which are smaller, shorter, and olive-shaped, and are very largely consumed by country folk. The Haricot's suisses sang de bœuf, suisse rouge or indien, and H. ture are abundantly supplied in a dried state to the Halle market at Paris. The crop can always be gathered within the space of five months from the time of sowing, and a still shorter period suffices for those kinds of which the Beans are consumed in the fresh or undried state, while those of which the green pods only are eaten are cleared off in the shortest time of all.

In the neighbourhood of Paris, where varieties of which the Beans are only consumed in the undried state are pretty extensively grown, three kinds are almost exclusively cultivated. Two of these I have already mentioned, viz., the Haricot Flageolet blanc and Soissons nain. The third is the H. Flageolet jaune, a very early, vigorous-growing and productive kind, the large, plump and very delicate flavoured seed or Bean of which is almost white at any period of its growth before it is dried. The Beans of the Flageolet rouge are also, but more rarely, consumed in the undried state.

For the supply of pods which are to be consumed in the green state (a very important part of this culture in the neighbourhood of all large towns, and of Paris in particular) the number of varieties which are in favour is almost unlimited. In one village district where the cultivators devote themselves to the supply of green pods, fifteen different varieties are grown, each of which in some particular point merits the preference which is given to it.

For furnishing the earliest green pods that are sent to market the varieties Flageolet d'Etampes, Noir de Belgique and Chocolat are equally good. The advantage of earliness, however, is accompanied with the drawback of a smaller yield than that which is produced by later bearing kinds, and it has now lost very much of its importance in consequence of the supplies which are sent from various districts

where the climate is more favourable to early growth than that of Paris. These green pods, like Asparagus, but in a less degree, bear carriage well and are sent to Paris from Bordeaux, Provence, and even from the south of Spain.

For the general or main supply of the season the preference is given to free-bearing kinds the pods of which are long, straight and cylindrical rather than too much flattened in shape, and of a fine green colour, without any dark streaks or markings. The dwarf kinds which are grown for the production of green pods should not be too short stemmed, otherwise the long pods, coming into contact with the ground, are liable to have their extremities dirtied and frequently rotted by the damp soil.

The following are the principal main-season dwarf kinds: Haricot Bagnolet or Suisse gris, one of the kinds most generally grown about Paris. It is not a very early variety, but is extremely productive, hardy, long-lasting and continuous bearing. There is a sub-variety of it which has crimped leaves. H. Solitaire is another form of H. Bagnolet, with a more branching or bushy habit of growth and smaller-sized seeds or Beans. This, it is said, received its name from the circumstance that only one Bean of it is needed, in planting, to form a rather thick or bushy growth. Be that as it may, the practice now is to plant three or four beans of it together in each pocket, in the same way as the other kinds are planted.

The variety named Gloire de Dijon is ten days earlier than the Bagnolet and bears broader pods and not so abundantly. The two kinds might be grown together, so as to secure from the combination both an earlier crop and also a plentiful and long-continued one. The Haricot Russe, which is somewhat taller and not so branching in growth, resembles the Bagnolet in the length of its pods. Its seeds or Beans are of a dull grey colour and not glistening like the beans of the other varieties. The H. Flageolet noir is still grown to some extent about Paris. It has a rather delicate constitution, but its long pods are remarkably handsome in appearance. The variety Shah de Perse is coming more and more into favour for the production of green pods, as it furnishes longer, straighter, and finer looking pods than any other dwarf variety. The plant is of very vigorous growth and bears broad leaves. This variety does best in soils which are constantly more or less moist up to a certain degree.

The culture of the edible-podded or mange-tout varieties may be in some measure compared to that of kinds whose pods are gathered while green. In both cases the pods are eaten together with their contents, but the pods of the mange-tout kinds are usually allowed to become more advanced in growth, so that the Beans which they contain are more or less fully formed when the pods are gathered for table use.

The best known and most highly esteemed of all the edible-podded kinds in the neighbourhood of Paris is the long-podded Haricot Beurré noir nain. This is clearly distinguishable from the old-fashioned H. Beurré noir nain or noir nain d'Alger by the wider intervals between the Beans in the pod. The Beans also are longer and narrower at the ends. The pod, instead of being short and thick, is almost as long as the pod of a Flageolet. The plant is vigorous-growing, hardy and very productive. The Haricot nain mange-tout extra-hâtif and the H. Beurré blanc nam are also to be recommended for the whiteness of their Beans, and the first-named of these varieties for its special earliness.

Amongst the edible podded kinds with green or coloured pods I may also mention Haricot nain unique, an exceedingly productive and hardy kind, bearing numerous thick pods, and the singular H. nain à cosses violettes, an early and free-bearing variety, the pods of which when boiled lose their natural deep violet colour and become as green as those of any other kind.

The cultivation of a crop of Haricots or Kidney Beans does not occupy the ground for too long a time, and it mostly leaves the soil clean and fertile for some other crop to follow. This is one of its recommendations. When the plants are grown for the sake of the ripe Beans only, the crop does not demand anything like the amount of hand labour that is required when they are grown for the green pods.

(To be continued.)

## THE PEA AND BEAN WEEVIL.

(SITONES LINEATUS.)

THE Board of Agriculture have received complaints of damage having been done to Peas by a weevil, which feeds upon several leguminous plants. This insect is recognised as the Pea and Bean weevil, to which attention was drawn by the Board in 1892. Peas and Beans are very subject to attacks by this insect, but the injury is frequently attributed to slugs, because the weevil is not by any means easily seen. It is of a dull colour, and falls to the ground on the least alarm. The weevil itself eats the leaves and young shoots of the Pea and Bean plants, and its larvæ devour their roots. It is often most troublesome in market gardens and allotment grounds, and in some years an extensive reduction in the crops of Peas and Beans has resulted from its attacks. It has been known also to attack Sweet Peas in gardens. It sometimes seriously injures red Clover in its early stages, and its small white maggots, or larvæ, also spoil "second cuts" of Clover by eating the roots of the plants and stopping their growth. Trifolium, too, suffers considerably, particularly in its early stages, from the attacks of this weevil, although the injury is generally attributed to slugs and other insects.

### DESCRIPTION AND LIFE HISTORY.

The Pea and Bean weevil is a quarter of an inch long. Its ground colour is dark, but the body is covered with greyish scales, which in some specimens are of a slightly greenish shade. There are three lines of this grey, or grey-green, hue on the thorax, and many lines on the wing cases. The antennæ are of a red colour, very slender, with club terminations. The legs are ferruginous. As Canon Fowler says, "the tibiae of the male are curved and armed with a small hook." It is not known where the eggs are placed. Egg-laying begins in the early spring. The larvæ, or maggots, which are white, legless, nearly a quarter of an inch long, and somewhat curved, live in the roots of Clover, Peas, Beans, and other leguminous plants, and there change to pupæ.

It is certain that some of the weevils pass the winter in weevil form. Probably, in other cases hibernation takes place in the pupal state, though this is not definitely known. Nordlinger observes that many weevils come from the pupæ at the end of August, and without doubt hibernate in weevil shape. From observation, it is plain that these insects hibernate in the perfect, as well as in the pupal state. Larvæ have also been found at all seasons of the year among the roots of Clover. A favourite resort of the hibernating weevils is in the straws of stubble. They are also carried in quantities with Peas and Beans into ricks and barns. These weevils feed by night as well as by day.

### METHODS OF PREVENTION AND REMEDIES.

Lime and soot, either alone or mixed, may be advantageously distributed over infested plants

while the dew is upon them, or after rain. Finely-powdered guano also may be used in this way. Applications of weak solutions of paraffin, with a little soft soap, would make infested plants distasteful to these insects. Fine powdery materials can be easily applied and well distributed with knap-sack machines.

When Peas and Beans are attacked, it would be desirable to press the earth tightly and firmly close round the plants, in order to prevent the beetles from coming up from the earth. This might be done by men and boys walking with a foot on either side of each row of plants. Summer-fallowing of land after an attack would be very desirable. Wheat after Clover ley is often infested by swarms of weevils. In this case it would be dangerous to sow Trifolium at all. If it is sown the land should be "broad-shared," or cultivated and ploughed. The stubble should be burnt. The burning of stubble, weeds, roots, and rubbish is comparatively seldom adopted in these days. It is believed that the infrequency of this practice is one cause of the more frequent and more destructive visitations of insects injurious to crops. Infested Clover leys should be deeply ploughed, with a "skim" coulter on the plough, and thoroughly well pressed. Roots on the top should be removed and burnt, not carted to the outsides and left in lumps.

### A MAY MORNING.

THE great Tree Peony's creamy flowers are drenched with last night's heavy dew, and in one of them an iridescent-winged Rose beetle brushes glistening drops from the satin petals. The bland air, whose every breath is a benediction, gently sways the heavy heads of the yellow Tulips that, last of their race, glow beneath a northern wall. The Forget-me-not border under the Lilac tree is a hazy mist of blue. Against a background of sombre Yew the first of the large scarlet Poppies blazes. The land is a land of promise—promise of profuse blossoming, of bountiful verdure. The bank of Azaleas and Rhododendrons is hourly enlarging its coloured mantle—daily adding tint to tint. The white Lilac is even now in full flower, just beating her coloured sister in the race, in which Laburnum and pink Thorn, Syringa, and Guedler Rose will not be far behind.

At the far end of the lawn, as six sonorous notes ring out from the deep-toned bell in the neighbouring church tower, a chaffinch, startled from her nest in the Ivy clad summer-house, chirps querulously, less placid than the green linnet that has built between the layers of the Deodar's boughs, which sits on in patient expectancy, heedless alike of the belfry's call to prayer or praise—of summons to the altar or the grave.

In rapid flight, now high, now low, the swallows pass and re-pass, while far above, in an azure sky, wheel the black arcs of the swift's wings. From the topmost sprig of the Wellingtonia a thrush is singing, and distant echoes reiterate the euckoo's call.

The day is an interlude—an interlude of peace. The hour is an hour of which the keynote is quietude. Restful to the eye is the old house embowered in blossom and leaf, the flowers of the Wistaria mingling with the glossy foliage of the Magnolia—Rêve d'Or Roses with Clematis and Jasmine. Restful the view to the southward—the sight of field succeeding field, hill swelling into hill, blue distances melting into bluer atmosphere, but most restful of all, in the hush of the spring morning, is the orchard. There let us wend our way, strolling past the Cedars, with their memories of other climes—past the arbour, which in another week the Laburnum will have shrouded in a golden veil—past the great Chestnut, whose giant limbs are lost in a wealth of verdant fans, and whose blossoms are already whitening towards perfection—to where, marked only by the light railings and sudden, foot-high Grass on the further side, lawn merges into orchard. An orchard less profitable than picturesque, with gracious vistas gently sloping westward—vistas canopied with the pink and

white of Apple blossom, carpeted with Buttercups and Lady's-smocks that almost hide the emerald of the lush-green Grass now growing so strongly. Happy aisles of Lichen-covered trunks, in whose recesses the green woodpecker has made her nest. Surely there are few more beautiful sights than such an orchard in the early hours of a May morning. S. W. F.

## NOTES OF THE WEEK.

**Dianthus callizonus.**—This rare and beautiful alpine Pink is well grown at Kew, where we noted several specimens in the house devoted to alpine gems, all of them flowering freely. It is quite distinct from other species, the flowers large, of a soft rose colour, with a darker rosy zone in the centre covered with tiny white spots.

**Cattleya Mendeli.**—The Hon. Miss Winn sends you a *C. Mendeli*. Please say if this is what is called a white form, and what you think of it.—J. EASTER, *Nostall Priory*.

\* \* A very beautiful form, but, unfortunately for you, not the white *C. Mendeli*. The flower you send is very richly coloured, a well marked and delightful variety.—ED.

**Viburnum pyriformum.**—A large specimen of this old, but little-known North American species is flowering freely in the grounds at Syon House. It is 12 feet or more in height, with a wide spread of branches. The leaves, as the name implies, are like those of a *Pyrus*, and the flower-clusters resemble those of the Wayfaring Tree, but are whiter.

**Hydrangea Thomas Hogg.**—There is a remarkably fine specimen of this white-flowered form in the exhibition house of the Botanic Gardens, Edgbaston, Birmingham, which has produced about 100 trusses, and a noteworthy feature is that the corymbs are all of such good average size. It thus makes a noble conservatory plant.—R. D.

**Abutilon vitifolium.**—Mr. Hartland sends us from Cork beautiful flowers of this in clusters of four or five, the blooms very large and of a lovely pale lilac shade. It seems a little different from other forms we have seen. He says that the birds build their nests in the trunk of the tree, but he does not tell us whether a wall is needed to flower it in such perfection.

**Viburnum plicatum** is not a shrub one would recommend for training on walls, but a plant on the wall in the R.H.S. Gardens, Chiswick, is a perfect picture of profuse bloom. It is covered so thickly with its flower-clusters from bottom to top, that scarcely a green leaf is visible. Bushy plants in the rock garden are only thinly flowered, so that it would appear as if the wall treatment was more favourable.

**Forget-me-nots.**—I enclose you three varieties of *Myosotis* which, amongst others, I have raised from seed. No. 1 is a very strong growing var. and rather tall; No. 2 grows very compact and dwarf. All the varieties are beautifully scented. I should be very pleased to have your opinion of them.—ARTHUR RHODES.

\* \* Lovely forms of the wood Forget-me-not, worthy of further trial.—ED.

**Rosa nutkana** is a vigorous and handsome single Rose, conspicuous even among many kinds in flower at Kew. The bush is quite 8 feet high, and the shoots have few spines. The flowers are large, numerous, and of a soft pink colour. There seems to be some uncertainty, however, as to the true *Nootka* Rose which we have seen described in the *Garden and Forest* as one of the finest wild Roses of Western America, the flowers white, both flowers and fruit larger than those of any other American species.

**Hieracium villosum.**—The *Hieracium* family and its kindred are a host chiefly of weedy character, but an exception must be made in favour of one or two kinds that deserve some attention, especially the subject of this note, now flowering

finely at Kew. The Shaggy Hawkweed is an appropriate name for it, as the leaves and flower-stems as well are covered with white shaggy hairs. The flower is large, of a rich yellow colour, borne on a stem about 1 foot high. A coloured plate was given of this Hawkweed in THE GARDEN of December 29, 1894.

**Hardy flowers in masses.**—Hardy flowers in a cut state arranged in a mass of one kind give a much more decided effect than a few spikes or trusses of each. At no time have I seen the effect of masses better than in the exhibit of Mr. Ladhams at the Southampton show. The flowers shown were the following: *Henchera sanguinea*, *Pyrethrum Mont Blanc*, *Sherlock*, single crimson, and *Hamlet*, single pink, *Aquilegia chrysantha*, *Hemerocallis Middendorffiana*, *Mertensia virginica*, *Iris Mme. Chereau*, *Erigeron aurantiacum*, *Campanula glomerata dahurica*, *Achillea mongolica* and grand spikes of *Dictamnus Fraxinella*.—E. M.

**Odontadenia speciosa.**—This bold and striking scandent shrub, probably best known under the name of *Dipladenia Harrisi*, is now in fine bloom in one of the stove houses at the Birmingham Botanic Gardens at Edgbaston. This, which appears to be the only species in cultivation, is planted out at the end of one of the houses, the shoots being trained along the rafters; the flowers, produced in large cymes, are bright yellow in colour, shaded with orange, large, stout, of fine form and delicately scented. It was introduced from Trinidad in 1854. It is so interesting and handsome a plant, that one wonders it is not more frequently met with.—R. D.

**Vaccoueria hexandra.**—It would be difficult to find a more graceful hardy plant than this, which has all the elegance and beauty of *Maidenhair Fern*, and is a gem for the rock garden to associate with some bright flowering plant. A mass of it is luxuriant in the rock garden at Kew, and it is also flowering prettily as well, the flowers white, on slender branched spikes, much like those of an *Epimedium*. For its leaf beauty, however, it is most noteworthy, and it is easy to grow in free, moist soil with full exposure, planted at the base of a large rock with a cool, northern aspect. It runs freely underground and may be readily increased by division.

**Poppy Prince of Orange.**—This is a very fine variety of the Oriental Poppy, with flowers of a lighter orange-scarlet shade than those of the type. A fine group of it is in flower at Syon House, and the plants being seedlings show some slight variations, some of them having the characteristic black spot at the base of the petals, whilst in others it is entirely absent. These giant Poppies have a fine effect when boldly grouped, especially in association with shrubs. Mr. Wythes also finds them useful cut flowers for large vases, and if cut just as the buds are bursting, the flowers open in the house and last longer than when they expand upon the plant.

**Arundo conspicua.**—In answer to Mr. E. Burrell (page 369) I am glad to be able to say that, in my garden in South Devon, *Arundo conspicua* has been uninjured by the late winter, although left totally unprotected. *Berberis Darwini*, close by, has been badly injured, quite three parts having to be cut away in the spring. *Bambusa aurea* and *B. vindi-glaucescens*, beyond looking a little brown at present, have passed through the ordeal scatheless, but *Fatsia japonica* has lost most of its upper leaves, which gives it an untidy look, and its decorative appearance will not be regained until the young shoots, now breaking strongly, have fully developed their foliage. I find that *Zauschneria californica* is dead, but there are no losses among the *Montbretias* or plants of *Gypsophila paniculata*.—S. W. F.

**Crinum crassifolium.**—In the Cambridge Botanic Garden this superb species, for which we are indebted to the liberality of M. Van Tubergen, is now finely in flower. It is growing at the foot of a south wall where it has had no protection during the past winter, and is a little earlier in bloom than *C. capense*. The flowers are white

within, suffused with pink on the outside, and strike one as forming a very compact umbel. Seven out of nine are open and in good condition at the same time. The leaves of this plant are each about 2 feet 6 inches long and 3 inches broad, deep green, not glaucous, and darker than those of *C. Moorci*. The peduncle is erect, stout and about 20 inches long. The flowers, shorter than those of *C. capense*, are well formed, the tube green, about 3 inches in length, segments about as long, oblong in shape and sharp-pointed. Mr. Baker in his "Handbook of the Amaryllidaceae" places this under *C. variabile*, but it is not said whether the plants are identical. Both names were applied by Herbert. At the time of writing Mr. Baker believed that this plant was no longer in cultivation. Fortunately we have it now. It without doubt is unsurpassed in beauty among the kinds which can be grown out-of-doors, and, moreover, it possesses a charming perfume. It is a native of Cape Colony.—R. I. LYNCH.

**Iris-s.**—I send herewith a small gathering of *Beardless Irises* (*I. apogon*). That marked No. 1 is undoubtedly *I. Douglasiana*. It reached me from a sure source, and, moreover, it appears to correspond exactly to Mr. Baker's description of that species. I have, however, here another very remarkable and distinct *Iris*, as to the botanical identity of which I should like to have had your opinion, but, unluckily, the dry weather has withered the last bloom beyond recognition. I purchased this also as *I. Douglasiana*, and it is identical with an *Iris* I had here some years ago from a separate source under the same name. The growth and habit of the latter plant is entirely different from No. 1, being much dwarfier and less vigorous. The flower, too, is totally distinct, the pale pink or lilac colour being almost, if not entirely absent, while the standards are horizontal and level with the falls, giving the flower a star-like appearance. It may possibly be *I. Bechebeyana*, or the *Santa Cruz* variety of *I. Douglasiana*, but it is certainly strangely like the *Iris* described as *I. bracteata* by Herr Max Leichtlin in THE GARDEN of the week before last (p. 354), only I have never knowingly succeeded in making *I. bracteata* grow here, though I have bought it two or three times. No. 2 is one of the most beautiful of all *Irises*, *I. tridentata*. No. 3 (sold to me as *I. setosa*) is no doubt *I. versicolor*, and No. 4 is its var., *I. v. virginica*, usually sold as *I. virginica*. No. 5 is a poor *Iris*—*I. ensata*. Nos. 6, 7, and 8 I grow as *I. humilis*, *I. graminea*, and *I. prismatica* respectively. Perhaps you may detect differences. I cannot do so myself. No. 9 is the var. *orientalis* of *I. sibirica*, usually sold as *I. orientalis*. No. 10 I had as *I. coriacea*. No. 11 was also sold to me as *I. prismatica*. I see little difference in any of these three latter, except that the first, No. 9, is the finest and most vigorous plant. No. 12 is the white var. of *I. sibirica*. *I. longipetala* and *I. missouriensis* (one of the most lovely of all *Irises*) are over. *I. hexagona* and *I. Grant Duffi* have not bloomed. There is no *Iris* in my garden at this minute more beautiful than *I. pseudacorus* and its variegated var., which has yellow flowers with rather darker markings. *I. aurea*, *I. Monnierii*, *I. orientalis* (or *ochroleuca*), and the *Kampferi* vars. are to come. Many of the *germanica* sorts are flowering badly this year.—J. C. L.

## EREMURUS ROBUSTUS AND UEMANTHUS KALBREYERI.

We send you flower-spikes of the above two plants. *Eremurus robustus* is by no means new nor of recent introduction. To my knowledge it has been cultivated for the last 15 years, but for some reason or another it has till now remained a plant of little popularity. It is a noble plant and ought to be one of the most prominent hardy perennials. With a little protection of some litter during the winter it proves perfectly hardy, and has withstood the extreme and long-lasting cold of last winter without the least injury and never before produced a spike of flowers of such

fine dimensions. The culture of this plant is very easy, as proved by the fact that a good strong plant once planted in the border will flower for several years in succession, after which it will take a rest for a season or two, producing a fine head of foliage only. It requires a rich soil, and when planting the hole ought to be sufficiently large to allow of at least 1 foot of rich stable manure to be placed at the bottom, taking care though in planting not to place the roots direct upon the manure, but let that first be covered with a layer of soil. After once planted, this plant ought to be left undisturbed for years, when it will bloom better year after year. As the big fleshy roots are yearly seeking fresh nutriment it will be found very beneficial to give every spring a good top dressing, and whilst growing, a good watering two or three times a week will help the plants on considerably. Almost any good rich soil will do to grow them in, but avoid peat or leaf-mould, which is rather too porous. We flower *E. robustus* every year, but we have never seen here nor anywhere else a spike of such unusual dimensions. The whole length of the spike, from the base to the tip of the inflorescence, measures 7 feet 8 inches, of which the flowering portion occupies at the time of cutting the spike some 3 feet 9 inches, with about 420 flowers and buds on the spike.

*Thaunanthus Kalbreyeri*, introduced into commerce some fourteen years ago, is one of the finest species known, producing umbels as much as 9 inches across, consisting of some 50 to 100 pretty, graceful spider-like blooms of a rich scarlet. The foliage is of a handsome lively green, and even out of bloom this plant is very ornamental for the greater part of the summer. Bulbs the size of a walnut will readily flower. It can easily be propagated by division after having bloomed, potting it in a good sandy loam with a slight addition of leaf-mould or peat, provided with a good and free drainage to avoid any stagnation of water, of which this plant requires a plentiful supply whilst growing. Towards the autumn when the foliage begins to turn yellow the bulbs must be allowed gradually to get into a dry state, when they will winter without any danger in any temperate greenhouse provided they are kept free from blackbeetles, mice, or other destructive pests. When about February they begin to show signs of vegetation, they will require a little water, which after being repotted must be gradually increased as the growth proceeds, and for the rest treat the same as other Amaryllids.—*LOUIS VAN HOUTTE, Ghent*

\* \* A noble and robust spike of *Eremurus*. We have had them as tall in England, but we think not so robust.—*Ed.*

**The weather in West Herts.**—During May there occurred only six unseasonably cold days, but a good many moderately cold nights. On as many as eleven days the highest temperature in shade exceeded 70°, and on three of these 75°, the maximum reading for a seasonable May being about 60°. On the hottest day of all the temperature rose to 83°, which is the highest reading recorded here in May during the ten years over which my observations extend. In London 86° was registered by Mr. G. J. Symons, F.R.S., who says, "This has been the hottest May day for twenty-seven years, and the hottest but one for thirty-seven years." At no time did the exposed thermometer show more than 4° of frost. During the past month the temperature of the soil at 2 feet deep rose from 51° to 60°, and at 1 foot deep from 53° to 65°. Taking the month as a whole the ground was warmer than in any of the nine previous Mays, with the exception of that of 1893, when the readings were considerably higher. Rain fell on only five days and to the aggregate depth of but half an inch, which is more than 15 inches below the mean for the month. Although the Berkhamsted rainfall tables reach back to 1856, there is no previous instance of a May quite as dry as this. In May, 1884, the fall of rain was, however, nearly as light. No rain at all has come through the light soil percolation

gauge since the middle of May, but the drainage through the heavier soil did not entirely cease until twelve days later. On May 30 the atmosphere was so dry at 3 o'clock in the afternoon, that the difference between the readings of the dry and wet bulb thermometers amounted to as much as 21°. May was a remarkably sunny month. On no fewer than fifteen days the sun shone brightly for over ten hours, and on four of these for over thirteen hours. In fact, this was not only the sunniest May of the past ten years, but during that period there has been only one other month when the average daily duration has exceeded it, and that was in July of the Jubilee year. A large bush of the wild Dog Rose growing in my garden came into blossom on May 30, or on the same day as last year, but six days earlier than its average date of flowering in the previous nine years. I cut my first Tea Rose (*Souvenir d'un Ami*) from the open ground on the 4th inst., which is ten days in advance of the nine years mean.—*E. M., Berkhamsted.*

## PUBLIC GARDENS.

**New open space for Woolwich.**—Her Royal Highness Princess Louise, Duchess of Fife, who was accompanied by the Duke of Fife, lately opened St. Mary's Churchyard, Woolwich, as a recreation ground for the public. The churchyard is about 4 acres in extent, and a donation of £1200 to enable it to be laid out as a place of public resort was given by Mr. J. Passmore Edwards. The Metropolitan Public Gardens Association have tastefully carried out the work, and the new open space will undoubtedly be a great boon to a populous locality. The Earl of Meath, in explaining the objects of the Association and its connection with the laying out of the ground, stated that the present was the eighty-first space that it had been instrumental in opening to the public, the extent of ground laid out being about 120 acres, representing a cost of some £40,000. The Association had likewise planted thousands of trees throughout the metropolis, and it had work in hand on six grounds at the present moment.

**Opening of Bethnal Green Gardens.**—It is doubtful if any open space in London was bought for the public 200 years ago, except that at Bethnal Green, which was formally opened yesterday by Mr. J. S. Fletcher, J.P., chairman of the Parks Committee of the London County Council. Two hundred and five years ago, when Bethnal Green woods was a favourite hunting resort of the citizens of London, Lady Wentworth (the then owner of the manor of Stepney) was anxious to let certain portions of the land for building, but several of the "nobility and gentry" who then dwelt in the "hamlet of Bethnoll Green" were equally anxious to prevent any incursion of the forerunner of the jerry-builder, and they bought for £200 some 15 acres of land and set it apart for public uses. On a portion of the land so acquired Bethnal Green Museum and gardens are now situated, and the remaining portion was purchased from the trustees by the London County Council for £8000, or some forty times its value 200 years ago. This portion, which comprises 6½ acres, has been tastefully laid out as a public garden, with a gymnasium attached for children.

**The Royal Gardeners' Orphan Fund.**—At a meeting of the committee held on the 31st ult. at the Horticultural Club, Mr. William Marshall presiding, the secretary announced that the late Mr. George Taber, senior partner in the firm of Messrs. Cooper, Taber and Co., seed merchants, Southwark Street, had bequeathed as a legacy to the firm four twenty-five pound shares in the company. The following special donations were announced: Mr. John Wills, 16, Onslow Crescent, S.W., the fifth annual birthday gift of £10 10s., with an intimation that for the next five years the sum would be increased to twenty guineas; from

Messrs. J. Waterer and Co., Bagshot Nurseries, £10; proceeds of a concert at the Shackleton Institute, near Godalming, per Mr. G. P. Baskett, £8; and from Mr. W. Evans, Wharfedale, Leeds, 5s.

**Royal Horticultural Society.**—The next fruit and floral meeting of the Royal Horticultural Society will be held in the Drill Hall, James Street, Victoria Street, Westminster, on Tuesday next, June 11, at 3 p.m. A lecture will be given by Mr. Frank Cant on "Rose Culture under Glass." The president of the society will also present the Veitchian Memorial medals to Mr. James Bateman, Mr. F. W. Moore and M. Victor Lemoine, of Nancy.—*J. W.*

**The Birmingham Botanic and Horticultural Society.**—A very interesting ceremony took place at the Botanic Gardens, Edgbaston, on the 29th ult., it being the occasion of opening the new alpine garden, and which is to be known as the High Nettlefold Alpine Garden, it being dedicated to the memory of this gentleman. The opening ceremony was performed by Mr. Geo. H. Kenrick, chairman of the Improvements sub-committee, who are in charge of a scheme which commenced with a considerable extension of the exhibition hall last year, and is intended to include among other things the lighting of the houses and terrace by means of electricity, and the institution of a system of popular botanical and horticultural lectures. As it was the first day of the Pansy and Viola show there was a considerable attendance of subscribers and others. In constructing the garden 250 tons of millstone grit from Yorkshire were used, in masses varying up to five tons, and it covers an area of nearly half an acre. The water supply is natural, due to two springs which were tapped in the progress of the work; attached is a bog garden. Owing to the exceptionally dry season, the planting is by no means complete, many subjects being left over until the autumn. The work was commenced in October last.

## OBITUARY.

**Mr. Robert Henderson.**—This skilful gardener, we are sorry to hear, has passed away at the age of seventy-one years. Of recent years he has lived in retirement, but visitors to the historic grounds of Fulham Palace will remember him with kindly feelings. He was gardener to the late Bishop Jackson, having previously served under him when Bishop of Lincoln—altogether a period of thirty-four years. Mr. Henderson loved well the many fine and interesting trees in the Fulham Palace grounds, and we have recollections of pleasant visits in his company to this suburban retreat, which showed in many ways how thoroughly he understood his work. He was buried at Fulham on Wednesday last in the presence of a gathering of old friends.

**Names of plants.**—*R. B.*—The Oak Currant: A gall produced by *Cynips quercus pedunculæ*.—*John Falconer.*—Remarkably fine forms, but we do not think they are worth varietal names.—*G. B. B.*—1, *Spiraea Reevesiana*; 2, *Hemerocallis flava*; 3, *Spiraea Banalda*; 4, next week.—*J. C. L.*—*Pavonia mollis.*—*Dunum.*—*Stanhopea eburnea.*—*J. Cranston.*—1, *Spergularia arvensis*; 2, *Mercurialis perennis.*—*S. N. T.*—1, *Silene alpestris*; 2, *Caragana triflorus*; 3, *Saxifraga hirculus*; 4, *Agrostemma coronaria*; 5, *Polystichum aculeatum*; 6, *Collomia coccinea.*—*Blisters.*—Looks like the leaf of one of the *Vriesias*. Please send a flower. Vine leaves query next week.—*W. J. P.*—1, *Clematis*, cannot undertake to name varieties, there are so many; 2, *Cassandra calyculata*; 3, *Cerasus serotina*; 4, send in flower; 5, *Herniaria glabra*; 6, *Sedum Sieboldi* type and variegated variety.—*E. P. Anderson.*—*Rhododendron catawbiense* var., or a hybrid with that species largely predominating.

**The Wild Garden:** or, the Naturalisation and Natural Grouping of Hardy Exotic Plants, with a chapter on the Garden of British Wild Flowers. Fourth edition, with wood engravings from drawings by Alfred Parsons, revised and enlarged. 1c. 4s. 8vo, linen cloth. Price 12s.; well bound in half morocco, 18s. Through all booksellers.

No. 1230. SATURDAY, June 15, 1895. Vol. XLVII.

"This is an Art  
Which does mend Nature: change it rather; but  
THE ART ITSELF IS NATURE."—Shakespeare.

## ORCHARD AND FRUIT GARDEN.

## THE BEST EARLY PEACH.

WHICH is the best early Peach? is a constantly recurring question. Hitherto I have recommended either Early Alexander or Waterloo, being of opinion that they are practically identical. I did not arrive at this conclusion without giving a fair trial to what I had supplied to me from different sources, but even then am by no means certain that Alexander had not been sent to me in the place of Waterloo, the latter being the later of the two introduced from America. When Early Alexander was becoming popular I ordered two trees of it from a well-known firm of nurserymen, planting one in an early house and the other in a successional compartment. Both trees grew satisfactorily, but imagine my disgust when that in the early house proved to be Alexandra Noblesse, a comparatively late variety, while that in the successional compartment turned out to be Crimson Galande. Whether or not the two American varieties are distinct, they are superior to anything in the way of early Peaches raised in this country. Early Beatrice is nearly or quite as early in ripening, but as far as appearance goes is poor compared with Early Alexander or Waterloo, and I do not admit its superiority in point of flavour. From a market grower's point of view neither Early Beatrice, Early Leopold, nor Early Alfred are worth house room, and as a private gardener I would only recommend them for pot culture where variety hath its charms. Early Rivers might have been a formidable rival to Early Alexander if only three parts or more of the fruit could be prevented from splitting from the base upwards. I have repeatedly tried fertilising the flowers of this variety with the pollen of Bellegarde, Royal George and other free-setters, but cannot say much was gained by this experiment, the stones splitting very much as in former years. What few fruits were sound attained to a great size and perfection, those well exposed to the light being very prettily coloured.

The one great fault of the American varieties, and to which attention has been repeatedly drawn in these pages, is the proneness of the trees to casting their flower buds prematurely. It happens under such very different conditions and under treatment that answered remarkably well in the case of other early and second early varieties, that it cannot well be attributed to faulty culture. When, therefore, a variety is forthcoming possessing the best qualities of Early Alexander and Waterloo without their one great defect, this ought to be welcomed and generally grown. In Amsden June we apparently have this improved variety, which, although sent us from America soon after the others above-named, has not made much headway. Mr. G. Wythes, of Syon Gardens, has brought the great value of this variety into prominence, and, thanks to his efforts, a first-class certificate was gained for it from the fruit committee of the Royal Horticultural Society in the spring of 1893. The tree from which the fruit was gathered was planted in the Syon Gardens in November, 1890, and now occupies a roof area of about 20 feet square. In May, 1892, seven dozen fine

fruits were gathered from it, and in April, 1893, nine dozen fruits were had, gathering commencing as early as April 12. This season there were fifteen dozen left on the tree and the gathering commenced on April 20. Seeing that all the fruits were moderately large and highly coloured, ripening, too, when such fine Peaches were worth probably £3 per dozen in the market, it must be conceded that this is the market grower's Peach. I made particular inquiries as to the bud-dropping, and found that Mr. Wythes has not been troubled with this failing in his tree either during this or any previous season. The quality is considered decidedly good, but of this I am unable to speak from experience, although I heartily wish that my half dozen trees of Early Alexander could be transformed into Amsden June before next season.

Descriptions of, and opinions upon, the merits of Amsden June vary considerably, and this, again, points to want of care on the part of nurserymen. Some of them may think they are supplying the genuine article, but may have been misled themselves. In the "Fruit Manual" Amsden—presumably meant for Amsden June—is described very favourably, but the fruit is said to part freely from its stone. Other authorities either describe it as shy-bearing or else ignore it altogether, while some private growers of my acquaintance speak of a perceptible bitterness in the taste. What Mr. Wythes is growing is neither a freestone nor a clingstone, but something between the two. Not till the fruits are fully ripe does it separate freely from the stone, while there is no bitterness of flavour to complain of any more than there is in the other early Peaches. Will some impartial American authority on Peaches help us in clearing up the distinctness, or otherwise, of the three American varieties I have named, their relative values also being given? From Mr. Wythes's standpoint very much valuable house and wall space in this country is wasted on the shy-bearing Early Alexander and Waterloo that would be far more profitably devoted to the sure-bearing Amsden June—similar to what he is cultivating.

W. IGGULDEN.

**Peach Early York.**—This is one of the very best of forcing Peaches, and worthy of a place in all early houses. It is not quite so large as some other varieties, but its free setting and cropping qualities, combined with excellence of flavour, atone for this. It is grown in several gardens in this neighbourhood, and always gives the greatest satisfaction. The short time it takes from commencing the second swelling until the fruit is ripe is astonishing, being very little behind the American varieties in this respect. Should any reader be thinking of adding another sort to his early or second early house, let him give Early York a trial, and he will not regret it. I have seldom known a tree of this Peach to give any trouble by bud-dropping when started.—J. C.

**Grafts on Pear walls.**—In hot situations on walls Pear grafts often do indifferently, many failing altogether. This is not to be wondered at, as the scions, as yet un-united and having only the small quantity of stored-up sap to support them, become literally baked up. This may in a great measure be prevented by daily syringings, which keep the clay from cracking badly and admitting the air. I always cover the clay with Moss, tying the same securely by means of matting or soft twine, thus further aiding in preserving the clay in a moist condition.—C.

**Apple Earl.**—This is one of the most useful Apples grown in this district, young trees after once commencing to bear doing so almost every year. The fruit, though larger, is not unlike

Normanton Wonder in appearance, and although fit for use in October will keep sound and sweet till March. It cooks beautifully, and is a delicious sauce Apple. This Apple is known in this neighbourhood under another and purely local name, but I have found that the correct name is Earl. Market growers intending planting for profit would do well to give this Apple a trial, as if as free and good generally speaking as it is hereabouts, it certainly would be worthy of extensive culture. Outwardly it is of a beautiful golden colour, the flesh being white in the extreme.—J. C.

**Strawberries for forcing.**—"W." (page 365) questions if any variety of Strawberry has given a better return than Noble. I think if he were to try Royal Sovereign and Noble under precisely similar conditions he would find the former the more satisfactory both in weight of crop, earliness of ripening and flavour. Royal Sovereign has proved this year to have an even more robust habit than Noble, which surpasses all other varieties in this respect.—S. W. F.

## APPLES FOR CIDER OR MARKET.

IN some parts of the west of England there is every prospect of a heavy crop of cider Apples, which is not altogether a blessing, for when this class of fruit is very plentiful, farmers and others, after making all the cider they consider requisite for their own requirements, desire to sell the remainder of their Apples either to cider manufacturers or to other farmers who have been less fortunate with their crops, but owing to abundant supplies the price is so low that it scarcely pays for the labour and expense of picking, measuring, and carting. Some years ago the crop of cider Apples was so great that touts actually rotted on the ground, or were eaten by cattle and pigs. Unfortunately, many of the orchards are planted with varieties of Apples that are utterly useless for any purposes other than for cider, as they will neither bake, boil, nor stew; consequently if the demand for this fruit is indifferent or bad, they are of no value except for a purpose which I think they are useful—in making a certain dye; the demand, however, is only very limited. There can be no doubt that it would be to the interest of planters of cider Apple trees if they selected those varieties that are valuable for their cider-making qualities, and also for market in seasons when it will pay best to dispose of them for cooking purposes. There are many sorts combining both those desirable elements, and when the best samples will realise from 7s. to 12s. per cwt. there is no question as to the wisdom of consigning them to market. Not only so, but all the small or damaged fruit can be utilised for cider, thus avoiding any waste and making the most of the crop possible. In some of our standard orchards we have a fair lot of the variety named Kingston Black, which is considered in the west one of the best cider Apples known, the liquor being of a superior flavour; therefore the demand for this sort is usually very good, but for years I have sent all the largest fruit to market, as it realises a good price through its very deep red colour, fair size, and handsome appearance added to its excellence for cooking. Cherry Pearmain is another cider sort of repute. It cooks well, is fair for dessert, a nice size and the trees when on good soil are enormous bearers; in fact there are many varieties of Apples far from being so profitable as this one. Herefordshire Beautin is frequently employed for cider making, though usually catalogued as a culinary variety, and should be more extensively planted by those who are anxious to have cider and market fruit from the same trees. The fruit is rather flat, highly coloured and produced in great abundance. Another advantage is its excellent keeping qualities. I have had it perfectly sound and plump at the end of May. Cowarne Red and New Redstreak are both very handsome cider Apples, also useful for market, as they cook well and combine a pleasing appearance with heavy cropping

powers. No doubt there are other varieties equally as well adapted for cider or market, but the sorts named have proved the most suitable with me, and I would suggest to any growers owning all or any of the varieties mentioned the application of a thorough soaking of liquid manure in a diluted form several times this summer if possible. Why I recommend this application now is that the effect will be practically immediate in its action, and will cause the fruit to swell to a large size, whereas chemical manures would be much slower in operating unless washed down to the roots by rain or watering. While not recommending the planting of cider Apples for market work alone, I can speak from experience how well they repay the grower for cultural attention and a liberal diet provided for their roots, as the fruit attains a size that entirely alters its appearance, so much so, that old men who had known the varieties all their lives, have been unable to recognise them.

W. G. C.

**A grand Nectarine tree.**—In the garden at Gunnersbury House is to be seen one of the most perfect trees imaginable of Nectarine Lord Napier. It has a house wholly devoted to it, at any rate as far as the roof is concerned, and it is to be regretted that this is not considerably larger than it is. The tree covers a roof area 24 feet by 13 feet, and apparently is equal to attaining much larger dimensions. It was planted in October, 1878, in a comparatively shallow inside border, this being only 2 feet deep exclusive of drainage. The stem is about 5 feet high, and I need hardly add stout and cleanly grown, while the branches and head generally are remarkably well balanced. When growing very strongly the fruit buds were shed rather freely by the stronger and medium sized wood, and Mr. Hudson took good care of the spray accordingly, as it was this that gave plenty of very fine fruit. Latterly all the wood bears abundantly, and a more even set of fruit could not well be had. Last summer Mr. Hudson gathered 600 fruits from the tree; this year there will not be so many, but the crop yet appears very heavy. Nearly all are on the upper side where they will colour beautifully, and, as a rule, the Nectarines obtained from this tree are of such a size and colour as to be nearly all equal to taking a prize at first-class fruit shows.—I.

**Apple Fearn's Pippin.**—We seldom hear or read of this admirable Apple, which leads one to imagine that it is not very extensively grown. So far, however, as certainty in cropping, appearance and quality are concerned, I know of few dessert Apples that can surpass it; indeed, I always look upon Fearn's Pippin as being a miniature Blenheim. In appearance it is very similar to that variety, and fruit from the south side of espalier trees colours up most beautifully. It is a fairly good keeper and tells well on the exhibition table. I have grown Fearn's Pippin for a good many years and do not remember once being without a crop. It may be as well to state that our soil is rather light and warm.—J. C.

**Summer pruning of Currants and Gooseberries.**—These trees will repay a little timely attention during this month (June) in the way of pruning useless lateral growth and giving the fruit and wood required for extension room to develop and ripen. Currant trees push out a lot of side or lateral growth. Those which proceed from the main branches and are strong should now be stopped at the sixth leaf. Any growths which break away afterwards should be stopped at the first leaf or joint, as if allowed to grow away they soon crowd up the main shoots and are a prey to aphides and the fruits get dirty, cleansing when in a ripe state being a difficult operation. When the trees have made a liberal growth it is an easy matter to top the main shoots if infested with fly and burn them. By cutting away the tops much of the aphid is removed. Young trees which are required to make a good growth want different treatment, and as it is not well to top too early in their case, I would advise dipping in tobacco water, quassia or other insecticide. One

thorough dipping will often clear the enemy. These trees it very dirty well repay syringing all over, as I notice when crippled in their early stages they rarely make clean healthy growths in successive seasons. Drought will be answerable for many trees being infested with aphid in light soils, and in such a mulch of manure will go a long way in keeping the trees clean. The same remarks apply to Gooseberries, as the trees may now be well lightened of superabundant wood and the fruits much assisted, as by removal of useless lateral growth the main shoots are much strengthened—an important point with weak growers, and by using the knife now there is less sucker growth later on, or when severe winter pruning is practised. Red spider is the worst pest in seasons of drought. Quassia extract is the best preventive used freely in the evening, and if the lateral growths or those not required for extension are removed, the fruits are finer and the trees can be kept much cleaner.—G. WYTHES.

**Shading newly-lifted Vines.**—I think it is a capital plan, and a safe one, too, in cases where old Vines were lifted in autumn to slightly shade the roof glass the following spring, especially if the house is modern and has a sharp pitch, as the Vines often flag in hot, sunny weather until thoroughly established. One lot of Vines came under my notice this season that were lifted last autumn, some fresh material being added to the border and the roots laid in nearer the surface. They broke well in February and grew very strongly, but as soon as hot sun came upon them down they went, not having apparently quite established themselves. This flagging continued for a fortnight in spite of syringings two or three times a day, and although they do not now flag they are much affected with spider. This, no doubt, was encouraged by the strain put upon them during the flagging period. A slight shade thrown over the glass for a time would, I think, have prevented this.—J. C.

#### BLISTERS ON VINE LEAVES.

WOULD you be good enough to state through the columns of THE GARDEN what causes the roughness on the back of the enclosed Vine leaves?—BLISTER.

\* \* I fail to discover anything very seriously wrong with the Vine leaves submitted by "Blister." To all appearances the rusty spots or small excrescences on the under-side of the leaves are the result, first, of the maintenance of an over-moist atmosphere, followed by a sudden rush of cold, dry air. When this treatment—that is to say, a faulty system of ventilation—is continued, the excrescences take the form of warts, and in this case the leaves are seriously injured, failing more or less to perform their functions. The leaves sent are not badly affected and may recover to a more healthy condition. It is just possible the damage to the leaves may have been caused by sulphur on the hot-water pipes or by fumigating with tobacco paper, but I am inclined to believe it is faulty ventilation. It is not such a great amount of air that is needed all during the growing period, as many growers would seem to think. We have had a period of very hot weather, the amount of sunshine and heat registered in May more nearly approaching what we might reasonably anticipate later, or say in July. All the same, there are hundreds of vineries where as yet no front air has been admitted, and that, too, without detriment to the crops, but rather contrariwise. When there is an undue delay in opening the top ventilators the sun's rays cause the temperature in the nearly or quite closed houses to be raised very considerably and suddenly, and the way out of this difficulty that occurs to many is to admit front air very freely, in addition to opening wide the top ventilators. A rush of colder air naturally follows and in its wake various ills, not the least among which is the much-to-be-dreaded mildew, also scalding, chills (considered by Mr. A. F. Barron one cause of shanking of berries), red spider attacks, rust

on the berries, warts on the leaves, "spot," and such like. If by any chance those in charge of a vinery are caught napping, and this may easily happen in the case of those having multifarious duties, there should be no sudden lowering of temperatures. Instead of setting the house wide open, admit the cooler outside air more gradually, and, in particular, guard against a rush through the front ventilators. Better open the doorways at the warmest ends than set wide open the front lights, especially when the wind is in the east. The worst attack of mildew I ever had to contend with was easily traceable to an assistant taking upon himself to open wide the front lights on a bright day in May. At that time they had not been previously opened, and to make matters worse, the wind was in the east and the vinery fully exposed to the full blast of this. What "Blister" and all other Grape growers should aim at is early ventilation, and if this is properly carried out it will be found that injuriously high temperatures will be prevented without setting all the ventilators wide open, while not infrequently little or no front air need be given till the colouring period has arrived. Those who have well studied this question of early *versus* reckless late ventilation can tell by the soft, genial air of a vinery on entering whether or not the ventilation had commenced as early as it ought to have done. It may be asked, how early ought a house to be opened? and this I will anticipate. During still, warm nights a chink of top air may well be put on at 10 p.m., and this be further increased directly the sun strikes full on the house in the morning, or if somewhat clouded, rather before the temperature of the house has risen to the height considered right for the day. A little heat in the hot-water pipes is most desirable. The aim should be to be ahead rather than behind with the ventilating, and if this plan is adopted very much less air need be admitted during the hottest part of the day than is needed where ventilation commences too late. So much importance does one very successful grower of Grapes attach to this early opening of the houses, that those in charge have frequently to open the top ventilators as early as 5 o'clock in the morning, the vineries in this case being span-roofed, and running from north to south, stand high, and get the full benefit of the morning sun.—W. I.

**Apple Golden Spire.**—An Apple that will crop heavily year after year is worthy of the notice of all interested in Apple culture, for, as repeatedly stated in THE GARDEN, we have such a host of practically useless sorts, that any varieties of good quality, profuse in bearing powers and hardy should be brought to the front and their merits placed before intending planters. As a culinary Apple, in season from the beginning of September to the end of November, no variety that I have grown will surpass Golden Spire. With the exception of one year, well remembered by fruit growers for the severe frost about May 20, this variety has not failed to produce a very heavy crop of large and beautiful golden fruit, which no doubt, combined with the conical shape of the Apple, was the means of giving it such an appropriate name. We have many trees in bush, cordon and standard form, and in every case they are remarkable for their prolific habit—in fact, grown as a cordon, no variety is so reliable, the fruit annually setting so freely that a large amount of thinning has to be done, many of the trusses having as many as ten perfect fruit on each truss. Anyone intending to plant only one or two trees, or perhaps as many hundreds, ought to give Golden Spire a trial, and I feel sure they will not be disappointed in the results. As a market Apple I have always found it sell freely at good prices, leaving other varieties like Keswick Codlin, Lord Grosvenor, and Lord Suffield some distance behind in value, and a long way behind in the yield of fruit per tree. Although we have had heavy crops of Golden Spire the last two years, the same trees this season are more thickly set with fruit than ever, proving again the variety's freedom and the immense value of feeding the



trees so liberally with plant food that they are not exhausted with bearing a full crop, but sufficiently strong to continue doing so every year unless prevented by very bad climatic conditions.—W. G. C.

**Strawberry plants killed by grubs** (*P. Hand*).—Your Strawberry beds are badly infested with *Melolontha vulgaris*, the grub of the cockchafer or May bug. The female lays eggs a few inches below the surface in small heaps in one special spot until close upon a hundred have been deposited, the eggs being oval and of a yellowish colour. These are hatched in a fortnight, and when the larvæ are full-sized they subsist upon the roots of various plants. Are your Strawberries planted in recently turned-up turfed land? as if so, the grubs would have been in the soil previous to the Strawberries being planted, and would feed upon the young plants at this season, as they remain in the earth till spring. The best remedies are the following, but you will find winter the best time to get rid of them. When the ground can be turned up roughly and scarified, birds, especially starlings, readily devour the grubs. By using gas-lime freely, digging in deeply, the grubs can be got rid, but of course it is well to allow some time to elapse before cropping if much lime is used. I would advise you to thoroughly work your soil; crop it with a quick-growing green crop and dig it in.—G. W.

## ORCHIDS.

### SMALL COLLECTIONS OF ORCHIDS.

THE increasing number of small collections of Orchids springing up in all directions, not only in the vicinity of large towns, but even in country villages, augurs well for a continuance of the popularity of this favourite class of plants. The frequent auction sales in London have done much towards furnishing these small collections, and most provincial nurserymen now include a few of the better-known kinds in their stock. An occasional sale in a provincial town of plants from a well-known firm has, I know, given a great impetus to Orchid growing in its locality, and the frequent references to Orchids in the press cause inquiries to be made about them. The interest taken in the plants by this class of cultivators is evinced by the nature of the queries that come to hand from time to time respecting their culture, and with a view to aid these beginners in their choice these few lines are penned. The most successful amateur cultivators will be those who, in forming their collections, keep to a few of the best known and easiest grown kinds, selecting them to suit the house they are to be grown in. Thus it is no use trying to grow *Dendrobiums* and *Odontoglossums* under similar conditions, though both are easily grown and essentially Orchids for beginners if arranged in a suitable structure and temperature. If only one house is devoted to their culture I would advise keeping this at a temperature suitable for *Cattleyas*, or a minimum winter temperature of 50°, allowing it to rise in summer to 65° by fire heat, running up to 78° or 80° when the sun is bright. In this temperature it is possible to grow a great variety of Orchids, including some of the most beautiful and distinct kinds in existence, by a little forethought and care in arrangement, and if an ordinary garden frame can be devoted to them in summer, the cool section of *Odontoglossums*, *Oncidiums* and other favourite genera may be included. In a house of this description *Cattleyas* are a host in themselves, keeping up a succession of gorgeous flowers the whole year through. *Dendrobiums* of many beautiful species may also be included, the evergreen section being chosen as far as possible, and

leaving out those that require the strongest heat. There are no Orchids that produce a better flowering return for the room they take up than the latter, and their culture, as noted from time to time in THE GARDEN, is of the simplest description. If there are shady corners to be filled up there are many less interesting Orchids than *Cypripediums*, and some of the most free-flowering kinds in the genus do well in a *Cattleya* house temperature. *Celogyne cristata*, too, is more satisfactory if well shaded, and this is perhaps the most useful Orchid in cultivation. *Oncidiums* are a very interesting class of plants, which cannot fail to be satisfactory under ordinary conditions of culture, their chief requirements being a suitable rooting medium for the various species. The *Marshallianum* and *macranthum* sections are best grouped with the *Odontoglossots* during the summer, but the *crispum*, *Forbesi*, and even *flexuosum* varieties are better for a little more heat. The most frequent cause of failure with all *Oncidiums* is allowing the flowers to remain on too long. The scores of beautiful flowers produced on the long elegant racemes command the admiration of all, and one is loth to curtail their beauty, but if allowed to remain too long, they drain the very life of the plants away, and more havoc is done by one season's overflowering than can be mended by years of judicious culture. The same rule holds good to a certain extent with *Odontoglossums*, and here again for a like reason. These and *Lycastes*, with a few of the better-known *Masdevallias*, are often seen in, and very suitable for, the small collections referred to. In short, there is no lack of beautiful and easily grown species, and in contrast to the high prices now obtained for novel and unique hybrids is the very cheap rate at which these can be obtained. L.

***Cattleya Schilleriana***.—This fine old *Cattleya* appears to be doing much better this season, for I have recently noticed it in fine form in several collections. It varies considerably in the colour of its flowers. It does not appear to have been imported in any large quantities, although it first flowered in the late Count Schiller's collection as far back as 1857. In appearance the growth of this plant much resembles that of *C. Aelandiae*, the bulbs attaining a height of from 5 inches to 6 inches, the leaves deep green above and purplish beneath. It is very rarely that more than a couple of blooms are produced upon a peduncle, and these are usually of a purplish brown on the sepals and petals, with dark spots. The lip is crimson-purple, sometimes striped with a deeper shade, and having a yellow disc. The flowers appear during the summer from the young growths.—W. H. G.

***Cypripedium philippinense*** (syn., *C. lavigatum*) is now in bloom with Messrs. Lewis and Co., of Southgate. This charming little species was introduced through Messrs. Veitch, of Chelsea, about thirty years ago. It grows naturally in one of the hottest parts of the globe, therefore requires plenty of heat under cultivation to grow it to perfection; in fact, it should be placed amongst other Orchids which come from the West Indies and which require as much heat as is allowed in the culture of these plants. It produces three and four blooms upon an erect scape. The flowers, very pretty and graceful, have a white, pointed dorsal sepal, regularly striped with purplish brown; the petals pendulous, narrow and slightly twisted, measuring about 6 inches in length, yellow at the base, changing to a purplish colour, and fringed with blackish hairs. The lip is helmet-shaped, yellowish buff and slightly striped with pale brown. This has proved a valuable kind during recent years to the hybridist, as many of our choice seedlings have this species as a parent. Amongst them may be mentioned *C. selligerum* and its varieties, *C. Vipani*, *C. bur-*

*fordense*, *C. Bryanianum* and many others. It is also closely allied to *C. Rebelinianum*, which was discovered by Mr. Sander's collector in the same locality and which many authorities regard as synonymous; but *C. Rebelinianum* has straighter petals and mostly striped with brown, the scape mere hairy and the foliage much narrower.—W. H. G.

### ONCIDIUMS.

THERE is a wondrous diversity in this very extensive genus, and yet the characteristics are so strongly marked, that one cannot fail to recognise them at a glance. They are all evergreen Orchids of great beauty, and inhabit various parts of South America. Some are large-growing and gross-feeding plants; others are tiny, delicate and close-growing species. The majority have pseudo-bulbs, but there is a section—as represented by *O. Lanceanum* and *O. Cavendishianum*—that are peculiar in these being absent, the plant consisting of large showy leaves upon a thick, hard rhizome. With plants differing so much in habit, varying modes of culture are naturally required, as *Oncidiums*, of all Orchids, cannot in this way be treated collectively. It would take up far too much space to treat at all serviceably of half the species that are worthy, but it may be useful to note a few of the best varieties and species that usually flower at this season. One of the most magnificent *Oncidiums* in cultivation is

*O. AMPLIATUM MAJUS*, the flowers of which are just now beginning to fade after having been open for seven weeks. This superb kind has large, roundish, compressed pseudo-bulbs, bearing very thick and leathery foliage. The flower-scapes are produced from the bases of the newly-ripened pseudo-bulb, and frequently attain a length of 36 inches. Upon these the flowers are plentifully produced, and they are very bright yellow, with a few brownish red spots on the sepals. Being a native of Costa Rica, this plant enjoys a high temperature, exposure to sunlight early in the afternoon, and a moderately moist atmosphere while growing. It may be grown on blocks or in shallow baskets in good peat fibre and Sphagnum, but in all cases care must be taken to ensure a free passage for the water, keeping the plants high and fixing them very firmly. The typical *O. ampliatum* is not so strong-growing or large-flowering as this variety, but is nevertheless a very fine Orchid.

*O. CONCOLOR* is a small, compact-growing Orchid, and one of the most beautiful cool house kinds. It is found growing naturally high up on the mountains in Brazil, and thrives well in shallow wood baskets or suspended pans. The pseudo-bulbs are usually about 1½ inches high, and bear a pair of short green leaves. From the base of these the graceful pendent racemes are produced, and the blossoms are of that clear shade of bright yellow that is so attractive in *Oncidiums*. The treatment often advised for *Odontoglossums* of the cooler section suits this species well, and if kept free from insects and in good condition at the root it never fails to flower freely. It is one of the most frequently exhibited Orchids, excellent for grouping.

*O. CURTUM* seems to have been brought from Brazil in 1846, and thrives in more heat than the last-named kind, being most satisfactory in the *Cattleya* house. It is very impatient of closeness at the root, and for this reason must have a thin layer of compost only. The pseudo-bulbs occur on wire-like rhizomes, and the flower-spikes are erect and dense. Each blossom measures about 1½ inches across, and is yellow, with reddish brown spots.

*O. FLEXUOSUM* is a very common Orchid, but one of the most useful and beautiful kinds in cultivation. For cutting there is hardly another species to compare with it, as the spikes, owing to their light, graceful appearance, can hardly be wrongly placed, working up well for all purposes.

This is usually grown too cool to get the best results and in too close a compost. Grown in a shady part of the Cattleya house in Sphagnum Moss and charcoal alone, it makes a wonderful growth, the spikes being very long and plentifully produced, as many as four from one pseudo-bulb not being at all uncommon. The flowers are too well known to need description and the plant is a native of Brazil, whence it was introduced early in the present century. The variety *majus* is larger than the type and the flowers more freely spotted.

*O. GARDNERI* is a very fine species of the *crispum* set, and very like *O. Forbesi* in general outline. The colour is bright yellow and brown, the latter predominating on the sepals and petals, the lip beautifully margined with the same colour. This may be grown in a cool, airy part of the Cattleya house, suspended near a ventilator if possible, on a trellised raft, with a little peat fibre and Sphagnum. Introduced from the Organ Mountains, in Brazil.

*O. PAPILIO* and *O. KRAMERIANUM* may be bracketed as far as treatment is concerned, they being simple varieties of the same species, though perfectly distinct. The latter is the deeper coloured form, and both are remarkable for the striking resemblance they bear to a butterfly. They thrive best in a strong, moist heat and require very little compost about their roots, Sphagnum Moss being the chief ingredient. The wiry peduncles rise from the base of the pseudo-bulbs and bear one flower at a time, these being produced at intervals all through the summer and early autumn. The frequent flowering ultimately weakens the spikes, as shown by the smaller blossoms produced; and when this is observed the old spikes should be cut off, when fresh vigorous ones will soon form. *O. Papilio* and its varieties are natives of the West Indies and have long been cultivated in this country, having been introduced in 1823.

There are several other species now in flower, but these will suffice for the present, and other deserving kinds will be noted as they come into bloom.

R.

#### DENDROBIUM FALCONERI.

This has been grown in our gardens for about forty years, and was at one time frequently seen at our large exhibitions. This year at the Temple show it was only represented by a single example, which was included in the collection staged by Mr. James Cypher, of Cheltenham. This plant was both well grown and well flowered. *D. Falconeri* succeeds best when grown upon a block of wood or attached to a piece of Tree Fern stem, and as it is a native of Northern India, coming from Assam, Bhotan, and the Khasia districts, where it grows at less than 4000 feet altitude, it will succeed best when placed close to the glass in the East India house, and where it should be liberally supplied with water during the growing season. After the growths are finished a slightly cooler temperature and less moisture will suffice, but care should be taken that the plants do not suffer from drought during this resting period. This fine Dendrobe produces long slender pendulous stems, which are knotted at short intervals, and carry a few small leaves upon the new growths. The bulbs emit roots along nearly their whole length, which gives the plant a curious appearance. The flowers, which appear singly from the leafless stems, each measure between 2 inches and 3 inches in diameter, the sepals and petals white, faintly flushed with rose, the tip of each being blotched with rich purple; the lip is also white, with a large central maroon blotch, a bright yellow spot on each side, and the tip purple as in the sepals and petals. It seems to have first appeared amongst a batch of mixed Orchids from India, but since it has been im-

ported in quantity some distinct varieties have come to hand, the best being

*D. FALCONERI GIGANTEUM*, which in every way resembles the typical form, but produces larger and stouter pseudo-bulbs. The blooms are upwards of 5 inches in diameter, of better substance, and deeper in colour. This form, I believe, first appeared in Messrs. Veitch's nursery at Chelsea.

*D. FALCONERI ALBIDULUM* first flowered in the gardens of Mr. H. Elliott, of Clapton, several years ago. It has blooms entirely white, except a slight tinge of rose at the tip of each segment. There also appears to be what is known as a blunt-petalled variety, which only differs from the typical form in having the petals quite oval instead of tapering to a point. This is a free-flowering and very desirable kind, as its blooms open during the months of May and June, and will continue in perfection for about a fortnight.

W. H. G.

#### NOTES ON PHALÆNOPSIS.

Nothing could have suited these lovely Orchids better than the tropical weather of the last few weeks, the plants growing most freely in the atmosphere, quickened, so to speak, by the action of the sun. Moisture in abundance, both at the root and in the atmosphere, has been necessary, but this is easily applied and can hardly be overdone just now. This quick growth is just what is required now, and the plants will rapidly pick up all they lost by the long cold winter. On dull, misty mornings, which are precursory to hot days, the ventilators and even the doors may be left open without the least fear, as this causes a natural rise in the temperature instead of an upward rush as the sun reaches the house. All tropical Orchids delight in this, and none more so than Phalænopsis. If a *Dendrobium* or similar plant grows too quickly and with a want of solidity, it is comparatively easy to remedy this by exposure in autumn, but this will not do for the Orchids under notice. The growth must be consolidated as it is made, and if this is the case it does not matter how rapid the progress is. Ventilate freely then in early morning and keep closer and shaded in the middle of the day when the outside temperature is high and the atmosphere parched. A little more ventilation just before closing time may be given and the blinds drawn up about an hour before the sun leaves the house. Plants that were repotted about six weeks ago are now rooting freely in the new compost. These require an increased supply of moisture at the root, and those showing flower-spikes are very carefully watched and the number of flowers restricted as they become visible. The strong-growing kinds are watered almost daily and occasionally lightly dewed with soft tepid water. *P. Luddemanniana* is doing well in small wood baskets, the charming blossoms, so delicately spotted with violet and purple, being now on the wane. Several young plants of this species are now in a 3-inch pot, whence they are to be transferred to small baskets. Never allow insects to gain the least foothold on the plants, as sponging, unless very carefully done, is very injurious by puncturing or bruising the foliage. For this reason soft water must always be used, as the hard water leaves a deposit on the leaves that requires some force to remove, and is, in the case of water from a chalky soil, injurious to the roots. If the temperature can be kept up to about 60° without fire-heat this need not be used at night, but on dull days a little warmth must be kept in the pipes to admit of ventilation and prevent any check to the plants.

R.

*Laelia majalis*.—I was glad to see "G." giving the foremost place among the Mexican species to this superb kind, which is quite worthy of all the praise he bestows upon it. That it is difficult to flower I can hardly agree with, as no Orchid flowers more constantly with me. The only thing necessary is a thorough ripening of the pseudo-bulbs, and the best way to do this is to

place the plants in the open air as soon as the growth is finished. If anyone who finds a difficulty in flowering it treats it in this way, other conditions being suitable, there need be no fear of the result. A plant in a 5-inch pan here has borne three twin-flowered scapes this season, although it flowered twice last year owing to a slight error in management. I quite agree with "G." that this and, in fact, all the species he names greatly dislike disturbance at the root, and for this reason repotting must be very carefully done.—H. R.

#### ORCHIDS ON FERN WALLS.

There are often many unsightly places in Orchid houses that puzzle those in charge to cover so as to make them look bright. Ferns and various fine-foliaged plants, such as *Begonias* of the *Rex* type, *Tradescantias* and others, are usually the plants selected, but a very welcome addition to this may be had by using a few Orchids of suitable kinds. For these it is obvious something in the way of special preparation is needed, and if a little care is given to this, very pretty effects may be produced. I once had occasion to cover the back wall of an *Odontoglossum* house, the owner wishing to try the experiment of growing Orchids in conjunction with Ferns, and although I must confess I was rather doubtful of success, the results were much better than I anticipated. The wall in question was 9 feet high, and there was a narrow border that had been used for *Roses* running parallel with it. This was taken out to a depth of 18 inches and 15 inches of rough potsherds and broken bricks substituted, and as the soil was of a light gravelly nature, this formed an efficient drainage. An undulating line of rockwork was placed on this, the upper portion being planted with *Pteris tremula*, *P. serrulata* and *Adiantum capillus-Veneris*. The bays left were filled with a rough mixture consisting of loam, turfy peat, Sphagnum, and potsherds, and in this were planted some pieces of *Cypripedium insigne* out of 8-inch and 9-inch pots. The plants were not kept on the level, but raised a few inches, the compost being banked round them, and the small green *Tradescantia* was allowed to run over this. The upper portion of the wall was wired with netting (2-inch mesh) and the Ferns planted in the usual way. Some suitably shaped pieces of cork were arranged in various positions to form receptacles for the Orchids, and the Ferns encouraged to hide this as far as practicable. *Celogyne cristata* and *Oncidium macranthum* were the Orchids principally used, with a few crowns of *Disa grandiflora* near the bottom. All these did well, but *Oncidium Marshallianum* was a failure. The pockets of cork were filled with the usual compost, especial care being taken to provide good drainage, and as the *Celogyne* outgrew its station the Ferns had to give way. There is possibly nothing new in this mode of growing Orchids and Ferns in conjunction, but I mention it that those who may be similarly placed may try the experiment in confidence. Possibly many other species would be suitable, and doubtless very pretty effects may be produced in a warm house where *Cypripediums* in variety may be used at the base, these Orchids having a very natural and striking appearance when viewed from above. Some growers may be inclined to favour brackets in similar positions to the cork pockets, placing the plants thereon when in flower, and in that way beautiful effects can be obtained—in fact are in more than one well-known nursery, to say nothing of private establishments, but the plants can never have the same easy, graceful appearance as they have when growing in the natural manner alluded to above.

R.

STOVE AND GREENHOUSE.

WATER LILY HOUSES.

THE engraving of the little Water Lily house at Castlewellan, Co. Down, is from a photograph specially taken for THE GARDEN by the Countess of Annesley. The house itself is really a warm plant stove, having a tank for the Nymphaeas, fringed with velvety-leaved Aroids and feathery Palms. The water in the tank is refreshed by the spray of a fountain, that also makes soft and pleasing music as it drops among the leaves and flowers. As so grown, the new and beautiful hybrid Nymphaeas of M. Latour-Marliac are nearly evergreen and almost perpetual in their bloom—white, rose, crimson and soft yellow. The waxy and, in some cases, sweetly odorous blossoms open morning after morning

shades of rose and pale yellow, white, and even dark crimson. M. Latour-Marliac's best seedlings and hybrids are exceedingly robust and beautiful, and they enable us to obtain somewhat of the effects of tropical Water Lilies in the open air, and even in cold water ponds or pools. Mr. Greenwood Pim, of Monkstown, who formerly had no water garden, overcame the difficulty by simply making a concrete tank of irregular outline and 18 inches deep in an open, sunny portion of his garden. It is in full sunshine and its margins are rock-fringed; thus a suitable position for many interesting alpine and bog plants is also obtained. In this little sheet of water only a few yards square there is just now quite a profusion of flowers, mostly of good forms of *N. alba*, but five or six of Marliac's rosy crimson and sulphur-flowered hybrids are also there, and probably now in bloom. In this sun-warmed water the common

for a new and improved house for aquatic plants, and those who have had the privilege of visiting Baroda House at Kensington have been delighted by the Water Lily gardens under glass that are there to be seen. The advantage of a glass-roofed tank is the longer season of blossoming that it enables one to enjoy, and even the most tender of tropical species, such as *Victoria*, *Euryale*, and *Nelumbium*, may be grown for six or eight months of the year minus any heating apparatus except that of the sunshine itself. At Daisy Hill, Newry, Mr. Smith has a very simple and efficient span-roofed house for Water Lilies, *Sarracenias*, *Darlingtonias*, and other fly-catching plants that is always a pleasure to see. It is simply a span-roofed house with a central walk, the tanks being about 18 inches deep, close up to the level of the eaves, and occupying all the remaining space. Here all the forms of *N. Marliacea*, *N. Leydekeri*, *N. odorata*, *N. pygmaea*, and *N. Helveola* grow and bloom in the prettiest possible way. Early in May *N. Leydekeri* opened its deep rosy-crimson petals, and one or other of M. Marliac's seedlings and the wild species will produce flowers in profusion until the waning days of autumn, after which the tanks can be covered with boards, and then become a shelter for other things.

Here in the College Gardens our first flowers did not open this year until June, and then *N. alba*, *N. pygmaea*, *N. Leydekeri*, *N. Chromatella*, and *N. carnea* all raced each other for precedence. This pond is about 4 feet deep, and is fed with cold water from the Dodder River, and for six weeks last winter it was covered with ice often to a depth of 8 inches, and yet neither Water Lily nor gold fish, of which there are some hundreds, suffered the slightest injury. The illustration only shows the indoor phase of Water Lily beauty at Castlewellan, for these flowers are largely grown there in open-air lakes and ponds as well as under glass, and there is every prospect of that noble demesne becoming as famous for its water plants and water-side vegetation as it now is for its magnificent trees, shrubs, and wall climbers, amongst which last may be mentioned some fine examples of *Vitis Coignetii*, one of the handsomest of foliage plants from Japan. The Earl of Annesley has long grown this noble species of *Vitis*, and many plant lovers are deeply indebted to him for his liberality in sharing with them his choicest rarities. F. W. BURBIDGE.



A Water Lily house at Castlewellan. Engraved for THE GARDEN from a photograph sent by the Countess of Annesley.

or evening after evening for at least six or eight months of the year. Beautiful and fresh and sweet always are these delicately modelled flowers, especially as seen in happy association with rarest of Palms and Ferns and the most delicate of foliage plants, for at Castlewellan the artist and the gardener work in unison. There are more than one or two ways of growing the choicest of hardy Water Lilies, however, but the advantage of a glass house is that the blooms are earlier and fresher, and a view of them is more easily obtainable at close quarters than when they float in the deep water of an open-air pond or pool.

Formerly we were confined to very few hardy Nymphaeas, and these mainly the white and rose-tinted forms of *N. alba*, but of recent years—thanks to collectors and hybridisers—we have at least twenty good hardy kinds of nearly all

white Water Lily blooms at least eight to ten days earlier that it does in deeper water, and there is the advantage of being able to look at, or to gather the ivory blooms without the slightest inconvenience. Thus at a cost of a few shillings for cement and other materials, and a clever labourer, anyone can make a pretty and practical tank for these most exquisite of flowers.

Wherever there are tanks indoors in warm plant houses the tropical species are readily grown. At Kew for years the tank in the old *Victoria* house has been jewelled with Nymphaeas and other aquatics, and the same is true at the Oxford and Cambridge Botanic Gardens and at Regent's Park. At Birmingham, where they have just inaugurated a very beautiful new rock, alpine and bog garden in memory of the late Mr. Hugh Nettlesfold, there is a project

**Stigmaphyllon ciliatum.**—This has very appropriately received the common name of Golden Vine. It is a stove climbing shrub, a native of Tropical America, of somewhat tall growth, the shoots of which are trained horizontally under the roof of the large Water Lily house at the Birmingham Botanic Gardens. The flowers are yellow, three to six in an umbel, and curiously clawed. It appears to bloom freely, and is just now an object of considerable interest. A figure of this plant was given in THE GARDEN for Feb. 25, 1888, p. 170.—R. D.

**Flowering Cacti.**—For the last few years Messrs. Veitch have identified themselves with a very free-flowering race of *Phyllocacti*, and most years some members of this section are recognised by the Royal Horticultural or Botanic Societies, while a small group of flowering examples is now regarded as one of the features of the Temple show. This year one variety—Excellent—received an award of merit. It is very distinct, the colour of the flower being a kind of warm orange-salmon, shading off to red towards the margins. Other varieties particularly noticeable were *Agatha*, soft pink; *Brilliant*, vivid scarlet; *Rowena*, bright crimson; *Gordonianus*, pink; *Jessica*, rose; and a beautiful white flower, which was without a name, but it seemed to be much

Cecilia. Well worthy of a place among the most select of this group is the variety J. T. Peacock, which is a form of the old P. speciosissimus, itself such a favourite with our forefathers. The striking violet lustre which overspreads the petals is in J. T. Peacock much more pronounced than in the older form, and few flowers have so brilliant a colouring. These different Phyllocacti are of very easy culture, for given an ordinary greenhouse anyone may succeed with them. A soil principally composed of loam with an admixture of sand and brickmakers' ballast or sandstone rubble will suit them perfectly. Over-watering must be especially guarded against, for though they may be kept pretty moist during the summer months, yet at the dull period of the year from their succulent nature they will stand a good while without water. A light, sunny spot in the greenhouse is also essential to their well-doing, for upon the thorough ripening of the wood resulting from full exposure to sunshine and careful watering during the dull season depends to a great extent the future display of bloom. Propagation of this class of Cacti is readily effected, for if a piece is broken off, potted, placed on a shelf in the greenhouse, and watered occasionally, it may be depended upon to root. The better class of flowering Cacti are, I think, increasing in popularity, and to the amateur with but little time (and that of an intermittent nature) to attend to them, they possess a great advantage over many other classes of plants.—H. P.

**Gloxinias.**—Judging by what has already been seen this season, there seems to be danger lest raisers of these flowers should make the same mistake that has been made with Begonias—that is, in seeking for such huge flowers. This rage in the Begonia bids fair to destroy that flower in popular estimation. The Gloxinia has blooms large enough for any purpose. Larger flowers will look coarse. We have almost everything that can be desired in habit and in freedom of flowering. We have, too, excellent size and form in the flowers. The chief need is in greater variety of colours and markings, and specially the introduction of more soft, refined hues, also in making the flowers stout and of the best form. Beautiful as are the forms having defined edges, it is possible to render them in that direction too formal. Generally self-coloured flowers are best.—D.

#### PLANTING OUT CALLAS.

We often read how successful some cultivators are with these plants who rely upon planting out. Doubtless much of the success is due to attention after planting, careful lifting in the autumn and other cultural details. So far I have secured the best results by a combination of the two methods usually adopted, and find I get much earlier flowers by potting and plunging the pots well over the rims during the growing season. When the plants are housed in the winter the pots are full of roots, and they flower much sooner than lifted plants, which have to make their new roots before they flower, a check being unavoidable when potting up. It may be urged that plants with a mass of healthy roots soon make new growth, but as the potting does not take place till September—often later in open weather—growth at that season is not so rapid as earlier, and I find it impossible to do the work, no matter how carefully lifted, without loss of some leaves and roots. The earlier these flowers are produced in the winter months the more valuable they are. At Christmas Calla flowers are most useful in room or church decoration, and they are none too plentiful at that season if the plants are potted up late, as even if forced they do not flower freely and give small blooms. With a deficiency of large flowers in mid-winter the Calla is one of our most useful plants, as five or six blooms in a large vase with a few leaves is an effective arrangement that lasts a long time in perfection. My mode of culture to obtain early blooms is simple, and may be interesting to those who grow these plants. At the end of June we turn all old flowering plants out of their pots, the plants having been rested

for a short time in the open by giving them less water. Each plant is divided, removing side or sucker growths, selecting the largest pieces, as these are the most valuable, and the next size for succession. The small ones are not often required, as the plants increase so rapidly. Each plant is potted singly and firmly in good loam, bone-meal, and either spent Mushroom manure or leaf-mould, well watered and plunged, covering the rims in trenches or deep drills for convenience of watering the plants during growth. As the new leaves push up towards August liquid manure is given freely and the plants watered overhead in the evening daily as they increase in growth. They are housed in September, and given more warmth early in November, they flower freely when placed in a temperature of 55° to 60° certainly better than when grown in the old way.

G. W. M.

**Vallota purpurea in flower.**—We are so accustomed to see *Vallota purpurea* flowering towards the end of the summer or early in the autumn that blossoms of this showy bulbous plant (during the month of May appear somewhat out of place. Such a result is, however, frequently attained now-a-days, not from any forcing or particular treatment that has been brought to bear upon them, but owing to the fact that great numbers are now sent to this country every year from their South African home, and they reach here totally dormant about the months of July or August, when if they are at once potted and kept slightly moist they continue to root throughout the winter, and on the return of spring the foliage is pushed up in a very vigorous fashion, and many of them will then flower. This precocious habit is only noticeable the first season, as the following year, though perhaps a few of them will bloom rather earlier than the normal season, in the majority of cases there is little difference. These imported bulbs need very careful treatment for a year or two, as they do not readily become established. The most critical period I find is the second winter that they pass in this country. During the first one they are, of course, quite dormant. They do not yield so good a type of flower as the old-fashioned form, so long cultivated in gardens, for the flower-stem is much longer, the flowers as a rule more star-like, while many of them are poor in colour. Flowers of a distinct salmon shade sometimes crop up among imported bulbs, and a white variety is spoken of, but it has never been my fortune to meet with this.—H. P.

**New Fuchsias.**—The Fuchsias distributed by that well-known raiser, Mr. Lye, are characterised by a great profusion of, in most cases, medium-sized symmetrical-shaped blossoms, but though these varieties are well known in the south and west, they are not so generally met with in other parts of the country. I am not aware if Mr. Lye has sent out many new forms within the last four or five years, but the bulk of the novelties come from the Continent, and large blooms with, in many cases, an ungainly habit of growth form their most prominent feature. Nearly all the new forms from the Continent are double-flowered, and though opinions may differ as to which are the more beautiful, the majority would, I think, be in favour of the single flowers. The double-flowered varieties consist of in many cases a huge corolla and sepals far too short to form a proportionate flower, while they are often disposed in a horizontal manner instead of being reflexed, as in most of the old single varieties. As Fuchsias are so readily raised from seed, it is somewhat singular that they are not more often increased in this way, for with a little care in saving the seed some good flowers can be counted upon, while at times curious forms crop up, and a very desirable new variety may also appear.—H. P.

**Pelargoniums in London.**—A great deal of the beauty of a Pelargonium consists in the foliage being retained in good condition till the flowering season, for if bare of leaves at the base, a plant, however fine the flowers may be, loses a good deal

of its attractiveness. A considerable amount of care and attention is necessary to grow these plants at their best, and the atmospheric surroundings play a very important part in the matter. So pronounced is this that it is now quite impossible to grow Pelargoniums as near London as they could be grown a few years ago. This remark applies also to other classes of plants, hence our market growers, who well recognise the value of a pure atmosphere, push farther and farther from the metropolis. In addition to the Pelargoniums the Bouvardias are a class of plants greatly injured by the smoke of London. The difficulty is not of course during the summer months, but in the autumn and winter when fogs prevail. At that season the plants are in a state of semi-darkness for days together, and that in conjunction with a sulphur-laden atmosphere will cause the leaves to turn yellow and drop. In this way I have seen a house of plants reduced from a flourishing state to little more than bare stems within a week. A free circulation of air is very necessary to the welfare of the Pelargonium, and so apparent is this that I have seen plants even in the summer lose a great many of their leaves after being packed up for a day or two and sent on a journey.—H. P.

#### PLANTS AT GUNNERSBURY HOUSE.

SCENTED Pelargoniums are remarkably well grown by Mr. Hudson at Gunnersbury House. One set of above a dozen plants, which have taken from four to six years to grow, are now each fully 6 feet through, and stand nearly as much in height. They are in neat, durable, circular tubs 17 inches across and the same in depth. These tubs are well pitched inside, a precaution that ought always to be taken, while outside they are oak-grained, and the bands and handles painted black. These charming old-fashioned, yet uncommon plants, as grown at Gunnersbury House, are really serviceable, as a few weeks' or months' service in their owner's town house and grounds appears to benefit them rather than otherwise. The species or varieties that lend themselves most readily to this form of culture are quercifolium, or the Oak-leaved variety; the old Pheasant's Foot (*radula* major), which is Citron scented; *filiolium* odoratum, and capitatum, this latter having Rose-scented foliage. In addition to these fine globular trained specimens Mr. Hudson has also grown some remarkably fine screen plants which are unique in their way. The variety selected for this method of training is *radula* major, and the plants of this are 6 feet high and over 8 feet through. They are in tubs similar to those already described, and according as the plants extend, a semi-circular width of trellis-work is added. I also saw a number of half specimens not only of the varieties named, but also of *quercifolium* minor, *Rollisson's Unique*, scarlet unique, *denticulatum* majus, *Pretty Polly*, fragrans or nutmeg scented; *Fair Ellen*, and *Little Gem*, all of which have scented foliage and in some instances attractive flowers. The soil used is Banstead loam and leaf soil, sulphate of ammonia being given as a manure when the pots are well filled with roots. All are cool greenhouse plants.

Trained sweet-scented Verbenas are appropriate companions for sweet-scented Pelargoniums, and of these there are a series of standards at Gunnersbury House that reflect the greatest credit on the grower. They were struck four years ago, and are grown with a clear stem, the heads being trained in the form of shields, urns, and such like. Trained *Marguerites* (*Chrysanthemum frutescens* varieties) were also fine, these likewise being intended for the town house. They were struck in January, 1894, and are now perfect globular specimens 6 feet through. These are in terra-cotta vases, and are already flowering grandly. Young plants are constantly being brought forward to take the place of the older ones, the former producing the finest flowers in the greatest profusion. They are kept free of the much-to-be-dreaded leaf-mining maggots by means of Richard's vapouriser, of which Mr. Hudson has

formed a very high opinion. Yet another old-fashioned plant that is here grown to perfection principally for town house and garden decoration is the small or Box-leaved Myrtle. These plants naturally assume a free pyramidal form, and are about 4 feet in height. They are flowered twice in the year. When I saw them in May all the points of the growth made last season were full of flower-buds, and the second crop of bloom will be had next autumn from the current year's growth. The plants were layered rather more than four years ago. They are most ornamental, and suitable for lawn, drive, and terrace decoration. W. I.

## FLOWER GARDEN.

### LILIUM ELEGANS.

This lovely Lily, so varied in form, colour, and stature, is an early flowering species, and its several varieties could be used in the garden in a variety of pretty ways, perhaps the best of

of striking colour; robustum, orange-yellow, spotted with crimson; sanguineum, deep red; Van Houttei, crimson, flamed with apricot, and spotted with black; Wallacei, spotted orange-red; and Wilsoni, of a rich apricot tint, and one of the latest to flower.

### FLOWER GARDEN NOTES.

VIOLAS are undoubtedly at the present time furnishing a brighter display than any other dwarf-flowering plant, and this despite the fact that from the commencement of flowering to the present date (June 7) the weather has certainly not been of the nature universally regarded as most conducive to their well-being. They are altogether immeasurably better than at the same time in 1893, when a similar dry spring was experienced; this, however, may be partly explained by the heavy rains of last winter and the ground being comparatively moist close under the surface. Also with the brief flowering season of 1893 always in memory I have since before planting in autumn dug in a fairly liberal dose of cow



*Lilium elegans.* From a photograph sent by Miss Willmott, Warley Place, Essex.

all in association with choice dwarf-growing shrubs. Among low evergreen shrubs or in little groups in the foreground these Lilies would find an admirable setting to bring out their rich colour effect. We should have more of this blending of flowers and shrubs in our gardens instead of allowing the shrubs to grow into a dense, confusing tangle, and setting out all the flowers in the full glare of the sun in prim beds and inartistic borders. There are quite a dozen distinct kinds, some of them only 1 foot or even less in height, others ranging up to 3 feet or more. They like sunny situations, and grow well in loamy soil. The type grows about 1 foot high, and has orange-red flowers quite 6 inches across. Alice Wilson has flowers of a bright lemon-yellow shade and is very distinct. It was figured in THE GARDEN of November 8, 1890. Alutaceum grows about 1 foot high, with flowers of a soft apricot-yellow shade, and Batemanniae, one of the tallest, has fine bright apricot flowers. Other handsome sorts are bicolor, orange-red flamed with scarlet; eruentum, deep blood red

manure, a proceeding that would be unnecessary on stiff land that retains moisture well, but that is highly beneficial and, indeed, almost indispensable when dealing with our light, dry soil. The chief drawback experienced in very dry seasons is the non-retention of colour in all pale shades in mauve, lavender, and lilac, and also in those flowers that combine a couple of shades in regular marking, as, for instance, Duchess of Fife. If at the present time I were to pick a couple of the most distinct and the most dissimilar flowers on Annie King, Lilies, William Niel and Blue Cloud, it would be hard in either of the four cases to convince anyone that the two blooms came from the same bed, except from some special characteristic in the eye, or the shape, or make of flower. This failure to retain the true colour is rather a difficulty when one is shading the varieties down in considerable quantities, but otherwise is in no way detrimental to the general appearance of the beds, except that one is not getting for the time being exactly what they bargained for. The fact that several new seedlings of the Kintore type are now being annually produced has suggested the advisability of classing them alone as, I believe, bedding Pansies. They are no doubt

capital varieties for large beds, flowering as freely and with as long-sustained effect as the Violetta type, although their habit is so different to the last-named, the power of reproduction by division into scores of shoots, each with its tiny complement of roots, being practically absent.

COMPLETION OF PLANTING.—Any plants remaining over after the planting of the flower garden proper can, if they are suitable for the purpose, be used for filling up bare spots that may exist on herbaceous borders or for shrubberies that may be rather thinly planted. A few plants of the large-leaved and of the Sweet Tobaccos are useful for such work, and if birds have made havoc of any rings of Sweet Peas (and it is no uncommon occurrence), plants remaining of Canary Creeper and the variegated Hop can take their place, a very pretty effect being produced by the pyramids of flower and foliage. Seented Pelargoniums are always acceptable, and a few clumps of these are by no means out of character with the permanent inmates of the borders. I also found last year occasional clumps of the Begonia semperflorens family furnish both in the matter of flower and foliage an admirable background to masses of dwarf silvery edgings. Where clumps of bulbs, as Hyacinths, Daffodils, &c., exist on herbaceous borders, the ground will soon be bare of foliage, and it is advisable if possible to save enough dwarf stuff in the way of dwarf Petunias and Lobelias, Mesembryanthemums, &c., to furnish the same. It may be noted that when planting anything in the way of annuals (whether naturally so or which from their tender constitution have for outdoor work to be classed as such) on herbaceous borders, it is always advisable to so regulate such planting that the temporary plants harmonise with their immediate surroundings. Thus the single small-flowered annual Sunflower should not find a place beside its perennial allies, but as a background to, say, early flowering Phloxes, Lychnis, &c., and the fine-foliaged Cosmos, which will come early into flower if planted in good time, may be used to brighten up a space between clumps of autumn-flowering Starworts. A few clumps of Dahlias, free-flowering Cactus varieties as Fire King, Panthea, and Constance for choice, will also prove acceptable to fill up gaps towards the back of borders; these can be planted rather close to clumps of early flowering Lilies, whose flower and foliage are over comparatively early in the season, causing somewhat unsightly gaps. *Aprropos* of Lilies, the old *candidum* is likely to be very fine this season: the flower-stems are very strong and vigorous and the foliage as yet free from disease. Beds that are partially filled with small Conifers as dot plants for a carpet of flower are quite at their best now, the silver and gold-tipped growths on Thujopsis, Thujas, Retinosporas and one or two Cupressus being very pronounced and beautifully clear and fresh. There are few better dwarf plants to be used in connection with the Conifers than Violas, and, once planted, they give no more trouble than the prompt removal of dying flowers. I have also, in lieu of the Violas, used a dwarf strain of Antirrhinum in crimson, yellow and white shades, and the effect somewhat later in the season is very pleasing. The Conifers should be kept within bounds by the judicious use of the knife, nothing, of course, in the way of clipping or shearing, but the removal of ragged shoots and the shortening of any that are inclined to go away to the prejudice of the plant as a whole, the object being to keep at once a symmetrical, dense, and yet natural specimen. In connection with the notes above on the filling up gaps in herbaceous borders with the more tender summer-flowering plants I may add that, as mentioned in the case of Lilies, it is always advisable to plant comparatively close to those things whose flowers are quickly over and that do not retain their foliage; or if the latter is retained, it has not a very presentable appearance for the remainder of the season. I like to make an herbaceous border as natural as possible by bold and judicious planting, but am by no means in favour of following Nature to the extent of allowing dead and decaying foliage to remain on the plants; indeed, in all cases where such borders

occupy a prominent position in gardens the practice could not be tolerated. E. BURRELL.

Claremont.

A SELECTION OF ORNAMENTAL HARDY BORDER PLANTS.

We are frequently asked by readers for lists of hardy and other plants, and we therefore offer no excuse for printing the following list, which contains what we regard as the best of the true herbaceous plants. Our aim has been to make a selection of the most reliable hardy flowers adapted to the soils and situations of gardens generally. No one can desire less than ourselves to limit the variety of plants of this sort, but a great deal depends upon whether a successful beginning is made in this way, and the following is a choice selection of plants upon which growers can depend, and which can be successfully cultivated in most districts. It should be borne in mind that, restricted as this selection is, there are whole classes of important hardy plants not included in it—for example, hardy bulbs, alpine and rock plants, and, lastly, biennial plants and plants which, like the Carnation and some of the double Rockets, require annual division or multiplication for successful culture.

- Acanthus spinosa
- Achillea Parmica fl.-pl.
- The Pearl
- Eupatorium
- Millefolium rosea
- mongolica
- Aconitum Napellus
- bicolor
- japonicum autumnale
- Adonis vernalis
- Astromeria aurantiaca
- Auemeone japonica
- Honorine Jobert
- Pulsatilla
- patens
- coronaria, many vars.
- alpina
- fulgens
- Robinsoniana
- sylvestris
- Anthericum Liliastrum
- Liliago major
- Aquilegia vulgaris and vars.
- chrysantha
- californica alba
- coerulea
- glandulosa
- Stuarti
- Armeria cephalotes
- grandiflora
- Arnebia echinoides
- Aster Amellus
- levis
- acris
- linearifolius
- Shortii
- turbinellus
- versicolor
- horizontalis
- Novi-Belgii vars.
- Bocconia cordata
- Brodiaea Howelli
- Calochortus in var.
- Caltha palustris and vars.
- Campanula Van Houttei
- nobilis and vars.
- celticifolia
- glomerata
- dahurica
- urticaefolia fl.-pl. alba
- carpatia and vars.
- grandis
- sophylla alba
- persicifolia and vars.
- Cardamine pratensis fl.-pl.
- Centaurea montana and vars.
- Centranthus ruber and vars.
- Cheiranthus
- Chelone (hybrid vars.)
- Chrysanthemum latifolium
- maximum
- indicum, good outdoor kinds
- Cimicifuga racemosa
- Coreopsis lanceolata
- grandiflora
- Coronilla varia
- Corydalis nobilis
- Cypripedium spectabile
- Delphiniums in var.
- Delphinium belladonna
- Delytra spectabilis
- Digitalis (Foxgloves)
- Dodecatheon Meadia and vars.
- Doronicum in var.
- Echinops Ritro
- Epilobium Fleischeri
- angustifolium
- album
- Epimedium macranthum
- superbum
- Eremurus robustus
- Bungei
- himalaicus
- Erigeron speciosum
- Eryngium alpinum
- amethystinum
- Olivierianum
- giganteum
- planum
- Funkia Sieboldi
- japonica
- grandiflora
- Gaillardias in var.
- Galega officinalis and var. alba
- Gentiana asclepiadica and alba
- acaulis
- Geranium armenum
- sanguineum and vars.
- Geum coecineum fl.-pl. minutum
- Gypsophila paniculata
- Helianthus autumnale
- pumilum
- Helianthus decapetalus
- latiflorus
- multiflorus fl.-pl.
- rigidus var. Miss Mel-lish (Harpalium)
- Helleborus niger and vars.
- orientalis and vars.
- colchicus
- atro-rubens
- Hemerocallis disticha fl.-pl.
- flava
- fulva
- graminea
- Dumortieri

- Heuchera sanguinea
- Hieracium aurantiacum
- Iberis sempervirens and vars.
- Garrexianna
- correa-folia
- Inula glandulosa
- Iris (rhizomatous kinds in var., especially Iris germanica and varieties Bridesmaid, dalmatica (pallida), Florentine, Gazelle, Madame Chereau, Queen of May, Victorine)
- Kniphofia in variety
- Lathyrus grandiflorus
- splendens
- latifolius and white var.
- Sibthorpi
- Liatris spicata
- pycnostachya
- Linaria dalmatica
- Peloria
- Linum perenne and vars.
- marbonnense
- flavum
- Lobelia cardinalis
- Queen Victoria
- Lupinus polyphyllus and vars.
- Lychnis vespertina fl.-pl. alba
- Viscaria rubra pl.
- chalcælonica fl.-pl.
- Haageana
- Lythrum Salicaria splendens
- Malva moschata alba
- Meconopsis Wallichii
- nepalensis
- Megasea (Saxifraga)
- Michauxia campanuloides
- Mouarda didyma
- fistulosa and vars.
- Oenothera missouriensis
- fruticosa
- speciosa
- tanacetifolia
- Youngi
- Onosma tauricum
- Orobas aurantius
- cyaneus
- lathyroides
- varios
- vernus and vars.
- Papaver orientale and vars.
- medicæale vars., various
- Paeonia anemoneflora and vars.
- albiflora and many varieties
- Paeonia officinalis and vars.
- tenuiflora and fl.-pl.
- Pentstemon procerus
- barbatus Torreyi
- Phloxes
- Herba-venti
- Russelliana
- Phlox ovata
- canadensis
- decaussata
- paniculata and vars.
- divaricata
- setacea and vars.
- Physalis Alkekengi
- Polemonium Richardsoni
- ceruleum
- reptans
- Polygonum cuspidatum
- Potentilla hybrida fl.-pl. vars.
- Plumbago Larpente
- Primula japonica
- Sieboldi
- Pyrethrum nigrinosum
- roseum and vars.
- Rudbeckia Newmanni
- Ranunculus acris fl.-pl.
- aconitifolius fl.-pl.
- amplexicaulis
- Saxifraga granulata fl.-pl.
- (Megasea) ligulata and vars.
- crassifolia
- cordifolia and other vars.
- longifolia
- pyramidalis
- Scabiosa caucasica
- Scutellaria alpina and vars.
- Sedum spectabile
- Senecio pulcher
- Sidalcea candida
- Spiræa palmata
- Aruncus (good vars.)
- Filipendula fl.-pl. japonica
- venusta
- Statice latifolia
- Symphytum bohemicum
- caucasicum
- Tiarella cordifolia
- Tradescantia virginica vars.
- Trollius asiaticus
- Fortunei
- europæus and vars.
- Veratrum nigrum
- album
- Verbascum phlomoides
- Chaisi
- olympicum
- Verbena venosa
- Veronica candida
- corymbosa
- longifolia subsessilis

NOTES ON HARDY PLANTS.

**Umbilicus spinosus.**—I wonder if it will be credited that this is really quite hardy—hardy to the extent implied by plants fully exposed all the winter of 1894-95. Generally, I believe, this neat and curious plant has been considered to need protection in even ordinary winters, and I have always made a point of placing it in a frame as soon as the fogs begin in October. I had, however, a good stock last year, and I purposely left out three specimens. All are now in good health, even one that was badly grazed by slugs in the autumn. If this succulent sometimes fails to stand our winters, it is not merely owing to the cold, for my plants must have several times had frost on them within 2° of zero.

**Aletris farinosa.**—In the same very similar conditions to the above as to aspect, a specimen of this has much surprised me by coming through the winter safely; it is at the base or moister part of the rockery, and not only is it not hurt, but it is now throwing up flower-spikes. The plant is a two-year acclimatized specimen.

**Hypericum balearicum.**—I never could keep this even in mild winters. I was induced to try it repeatedly because I heard from garden

friends how well it did and that it survived the cold, so on the chance that such a singular and beautiful species might be coaxed I often tried it, but it went off at the end of summer. A friend in Wales told me early this spring that his plants, though injured, were pretty safe. Many of us, however, have learnt to put little or no trust in the appearance of some plants until they have had the drying winds of March and the brilliant sunshine of April and May come over them.

**Genista Andreana.**—This shrub, as supplied by the trade, is pretty generally killed all over the country, at least so far as to be of no use for display this June. I raised some plants a few years ago from seed, and, as I explained last year in these columns, but a small percentage came true, i.e., yielding the partially crimson or mahogany-coloured flowers. The pan of seedlings in its entirety was planted, with the result that the common Broom (*G. scoparia*), the *Andreana*, are flourishing and flowering now in a mixed mass. Now what I want to point to especially is the fact that this crimson form got from seed is of a hardier constitution beyond all doubt. There is not a blackened twig on it, and in the same garden the worked (grafted) specimens are useless, and many quite killed. I venture to suggest that either the grafting or the *Laburnum* stock, which, I believe, is the one always employed, is not the best for scions of a variety thus proved to be otherwise more enduring.

**Arenaria Huteri.**—The pigmy herbage of this Sandwort is so dense, compact, and pubescent as to resemble that of *Androsace Wulferi*. I speak of its habit at the flowering time, and its flowers for the size of the other parts are quite large, resembling the full-sized pips of a white Lilac. It is of slow and dense growth, and during flowering the specimen is simply a flattened ball of snowy white bloom. It is quite cold and damp-proof. My plant has been two winters in the open.

**Spiræa Anthony Waterer.**—This is a decided advance on *S. Bumalda*; even the as yet small plants prove the free-flowering habit, as well as the deeper rosy crimson corymbs of blossom. I notice that in the case of every plant there is a tendency to variegation in the leaves—creamy white. One more question occurs to my mind about this *Spiræa*. Fine as it is, I do not see much difference between it and a kind I have grown two years as *Spiræa Bumalda ruberrima*. Perhaps it will be more just to compare them when the Anthony Waterer kind grows into stronger bushes.

**Sobolewska clavata.**—This, to those who have not fully proved its capabilities, may need a special note—a note of warning, so to speak, in the way of advising a not too hasty judgment upon it. It is a crucifer with round, thick clavate leaves. The flower-spikes run up in slender form quite 2 feet. At first the little white flowers may seem disappointing; they are inferior to those of the common *Arabis*, but the plant goes on and on spreading and branching. There is a wonderful development of lateral florescence and the early flowers are long-lasting; the consequence is, you get a cloud of pure flowers, elegantly posed on slender stems, which seen at a short or long distance is most effective. It is in this way only that I can see any value in this plant for decoration. I should advise that it be planted in threes or sixes, though in time the roots, which run somewhat, will make a wide specimen; but it is time that means all with this species, for if not seen in a bold piece the first year I fear many would pull it out. It certainly deserves a better fate, and judiciously placed it will do capital service.

**Edraianthus serpyllifolius.**—Never have I seen this lovely alpine flower so profusely as this spring. Plants need to be three years old before they give a true idea of what they really are, yet flowers occur the first year from cuttings and seed. Tender care must be bestowed on young stock, as a slug may spoil half-a-dozen in one night.

**Edraianthus pumiliorum.**—Charming as the above is, this to my mind is even more so, the

flowers being larger and of a sheeny red-purple. The flowers are set off by the quite distinct foliage, which is grassy, all radical, and of a grey or glaucous hue. The *Edraianthi* are supposed to be short-lived, but I think this is an error. The contrary is proved if you keep slugs away from them, but how to do it is the puzzle—they are so partial to these dainty things; and not only do they eat the tops in summer, but in mild periods in winter they will eat off the crowns right down below the surface. My plan is to dash over the plants once a week some dry silver sand; this is otherwise beneficial, as it repels the hot sunshine and helps to fix the slender collars.

**Dianthus Michael Foster.**—This is an early Pink of the alpine class. It is a sort of glorified *D. alpinus*, and suggests itself as something between *alpinus* and *neglectus*, and a better perennial than either. I have a strong specimen of this first now in full bloom, stature 7 inches.

**Saponaria ocymoides splendens.**—If you want bright rosy-red colour and plenty of it, plant this by all means; it is a glorious variety for bright weather, lasting a long time in the most exposed positions, but for effect at twilight the paler type is not to be despised; indeed in the evenings of the latter half of May and well into the month of June it actually lights up the rock garden by its myriad flowers and broad masses.

**Primula Reidi.**—This is now in bloom, and a plant to linger over. How rapidly the whole plant develops; there is scarcely a part of it to be seen in the last week of April, and by the first week in June or earlier in more salubrious climates than Yorkshire it gets into flower. The flowers are creamy white with just a suspicion of blue milk-white in the older flowers; the perfume too is as peculiar as it is full and spicy. I get seedlings to flower sometimes the first year, mostly the second, yet it is a capital perennial Primrose.

**Asperula Athoa** (Boiss.).—This is one of a group that has not long been grown here. None of our native species can scarcely give any idea of its habit and stature. It flowers profusely at a height of 2 inches to 3 inches; the whorled foliage is dense, thick and woolly, and the clusters of rosy-carmine flowers terminate every half procumbent stem. At the first glance a flowering specimen suggests an *Androsace*. I am assured of its hardiness, but hitherto I have kept it under glass in a cold frame with air always on.

**Asperula nitida** (Sib. and Sm.).—This is a totally different species; the tufts of leaves are as dense as a Club Moss, and of deep shining green, as implied by the name, and the bright coral-red flowers are in such compact clusters as to almost cover the foliar cushions; the total height when in flower is little more than 1 inch. Wedged between stones in vegetable soil that keeps moist it does well, and the effect is exquisite.

**Asperula carpathica** is a more lax plant, growing 3 inches to 4 inches high, somewhat resembling *hirta* in other respects; flower bright rose. I am sure this trio of alpine Woodruffs will delight alpine plant growers.

**Iris verna.**—I have now tried this fully exposed several years, and find it quite hardy. Stature 3 inches, or 6 inches to 7 inches when in flower. It likes a semi-boggy soil, and so grown is an evergreen plant with me. Its flowers are large for so small a plant, appearing in April, May, and June. They last but two or three days, are delicate in their colours and chaste to a degree. It is just the thing for the base of the rock garden with an east or west aspect.

**Saxifraga cotyledon.**—I believe this is less common than its variety *pyramidalis*, or even the queen of Saxifrages, *longifolia*, but it is, I think, superior to either as a flowering plant. Compared with these, usually considered the two choicest for big and symmetrical panicles of white bloom, its plumes are larger, denser, and more elegant, and the flowers being pure white (without spots) with longer and narrower petals, the effect is far more graceful. It only needs to be seen side by

side with the better-known favourites, and I think no one would dispute its superiority.

Woodville, Kirkstall.

J. WOOD.

#### SEEDLING DAFFODILS.

I AM obliged to Mr. Engleheart for advice given on this subject, and quite agree with him as to the undesirability of raising varieties that have an element of weakness in them. We want Daffodils that can be left to care for themselves in the orchard and woodland, and for this reason I selected the old double to breed from. I think by the aid of old Ajax we may in time secure a race of Daffodils, parti-coloured and white, that, whilst giving us the exquisite tint and form for instance of *cernuus* or *moschatus*, will be endowed with the vigour and reliability in all soils of Ajax. As regards the Tenby, I did not know, when some years ago I crossed it with *cernuus*, that it cannot be relied on in a general way. I am the fortunate possessor of a soil in which the Tenby flourishes like a weed and *cernuus* increases freely. I have had clumps of the latter not in any way disturbed for six years, and bearing some thirty blooms on stalks 18 inches high. I naturally thought that by making the Tenby the seed-bearer I should, perhaps, get pale-coloured varieties with a vigorous constitution. However undesirable it may be to cross two delicate kinds, there can scarcely be the same objection to the union of two varieties, one of which is capable of infusing hardiness and vigour into the offspring. Mr. Engleheart is aware of what has been done in this way with such things as *Rhododendrons* and *Gladioli*, the union of a tender and very hardy kind having given us a race of beautiful and thoroughly reliable garden flowers, and in the same manner, by using a robust variety as seed-bearer, one ought to be able to work some such change with Daffodils. Some of my seedling doubles are between Emperor and Ajax *Telamonius*. I think they will yield extra large blooms, they are so vigorous. Unfortunately, I have little time for hybridising Daffodils, but ever year I raise a few always from a different cross. The worst of it is, one has so long to wait, but the first five years bridged over, one may annually expect some new form, which, if not sufficiently distinct to be worthy of naming, will add to the attractions of the garden.

J. CORNHILL.

**Snowdrops in swamps.**—Has anyone tried the Snowdrop in swamps, flooded in winter, or other very damp or semi-sodden places? Or have any amateur readers of THE GARDEN grown them in water like *Hyacinths* or other bulbs? I have had sufficient experience in these directions to know that it can be done, but would be glad to have the experience of others. The finest show of common Snowdrops I have ever seen was in a swamp in a wood so soft and treacherous, that it was unsafe to stand five minutes in one place.—D. T. F.

**Stock Princess Alice.**—This beautiful white Stock is again proving itself most useful. Plants raised at the end of February and planted in the open borders in April have already grown to a large size, and are commencing to flower freely. Its earliness is one of its chief recommendations. Another good point about it is the freedom and strength of the side shoots and bloom spikes. With East Lothian and other strains one may get a grand central spike of bloom, but the secondary ones are of ten comparatively poor unless when the plants are grown on rich soil. With Princess Alice, however, these latter are always large and full, and the more the knife is used the more it grows and flowers. In this latter respect it certainly has no equal. All who esteem white Stocks should grow it.—J. C.

**Single Pyrethrum.**—That these are far more pleasing as cut flowers than are the double forms there can be no question, whilst their beauty in the garden is also great. But I want to ask of someone who may have experience whether the dark-coloured varieties are more en-

during when cut and placed in water than are the light-coloured ones. On an exceedingly hot day (May 30) I had given me to take home a few blooms of a dark red and of a pink form. All in the great heat soon flagged in the hand, and I slipped them into a loose umbrella. When I reached home they were placed in water. The pale ones lasted a few days, the red ones are still fine after nine days. I think the flowers were all of the same age, as the plants had been hard picked a few days previously.—D.

**Giant Poppies.**—There is a great fancy for blooms of these perennial Poppies on the part of ladies who purchase them in the market, where, having been exposed to the sun for several hours, it is found almost ere the flowers have been carried home the petals fall. These Poppies should be purchased only when in an unopened state. It is very different when the flowers are cut in the garden and set fresh into water, though even then no flowers are so enduring as are those cut early in the day and with the buds just breaking. Those who offer flowers for sale should have cool, moist places in which to keep them in hot weather. Here in the Kingston market cut flowers of all description are fully exposed to the sun and wind, there being no shelter of any description for them.—A. D.

## CHRYSANTHEMUMS.

### CHRYSANTHEMUM NOTES.

THERE should be no delay in getting the plants into the pots in which they are to flower. Early potting is a better plan than feeding with stimulants whilst the Chrysanthemums are in small pots, although the latter practice has been resorted to at times through being unable to do the potting because of other pressing work. I do not like the roots of any plant that is intended for growing into a large specimen to become woven and interwoven whilst the same is in a small state. There will certainly be a severe check when such are transferred to other pots, but if a plant be shifted just when the roots have taken to the earth by reaching the sides of the pots and just running through the drainage hole, we reduce the check to a minimum. Chrysanthemums like a loamy soil, and I generally try to provide that of the best quality. Loam, of course, varies according to the locality where it is cut; that of a yellow colour is most liked, and highly valued if full of fibre. Use two-thirds of loam in the compost, the other third being made up with horse manure, gritty material and bone-meal. The above is a good, sound, wholesome soil, which is preferred to a mixture made up of all kinds of fanciful things. The potting should be done in a very firm manner. This item cannot be too often mentioned. Stand the pots well apart in their summer quarters, which should be the most open spot in the garden. Neatly stake each plant so that the growth is secure against wind. For a week or so after the repotting has taken place it is advisable to water at the roots very sparingly, and if the weather be hot and dry at the time, a sprinkling with water overhead twice a day will prevent the leaves flagging. As I write there are indications of a sunny season. At least we have had during May above the average of sunshine, which fact makes one hope such weather may continue. Sunshine is most suitable for Chrysanthemums and a dry season, one that brings out the better qualities of the blossoms. Being a moisture-loving plant, the work of watering is considerable throughout dry summers, but such work must be cheerfully done and will bring its reward in the autumn.

The behaviour of varieties in certain seasons is an interesting study. For example, the dull,

sunless summer of last year was unsuitable for the development of choice blooms of the variety Lord Brooke, so telling in its colour of bronze. Scarcely a flower was to be seen of the terracotta-coloured Col. W. B. Smith. The rich dark crimson Wm. Seward was conspicuously absent, and the equally rich crimson Edwin Molyneux not seen in anything like good form. White-coloured varieties seem less affected by seasons than other shades, unless it be yellows, which are always good. The gigantic thick-petalled variety Mrs. C. Wheeler was not at all good last year, and consequently rarely seen at shows. Personally, this type is not one that commends itself, for not only is it coarse, but requires the purest of country air as well as the best of management to obtain exhibition blooms, and cultivated for other uses, that is, when allowed to grow a large number of flowers to a plant, Mrs. C. Wheeler assumes the form of a scanty arrangement of a few large petals with a huge yellow centre devoid of grace or colour. Beauty of Castlewood is very little better, and if one were to discontinue the growth of such varieties there would be very little loss. An interesting article on page 362 of THE GARDEN deals well with the subject of coarse varieties of Chrysanthemums. The remarks of Mr. J. C. Tallack are excellent, and I think with him that a system which assists in perpetuating such coarse, ungainly Chrysanthemum flowers as International, Mrs. C. Harman-Payne, Etoile de Lyon, Duke of York, Mrs. E. W. Clarke, Miss Ethel Addison, and others is wrong somewhere. It occurs to me that "the best judges" might exhibit a little less disposition to lengthen the number of "points" each bloom must possess, and a trifle more boldness when judging. That is to say, they might deal with coarse blossoms in a similar manner to that which obtains among our Rose-loving friends. An overgrown flower is marked a bad one, and as such tells, of course, against the exhibitor. But by this means Paul Neron, Ulrich Brunner, and Cabbage-like specimens of Her Majesty are duly apportioned their proper weight, and the prizes given to more charming, if less bulky, specimens. If judges of Chrysanthemums set the example exhibitors would soon follow, but at present the latter know that "weight" is the principal aim. Apparently we cannot hope for a more desirable taste in the matter of types of the Japanese Chrysanthemum being fostered by the National Chrysanthemum Society through its floral committee. Size seems to be the one thing needful. On referring to their meeting of October 24 last, I find their highest award was given in each case to Mr. R. Ballantine, Mrs. H. J. Jones, Reine d'Angleterre, and Amiral Avellan—varieties which my notes of the time tell me are absolutely devoid of graceful formation, if we except perhaps the first named. That possessed a dingy rose-lilac tint, but certainly had long flowering florets. The charming deep rich yellow Pallanza, the exceedingly bright bronzy M. C. Molin, the well-formed distinctly tinted M. Aug. de Lacviver, not being giants in dimensions, received the commendation of that body. I venture to say, however, that with or without the latter honour the last named sorts will become more popular than those first named. Regarding the best varieties of the autumn flower, I personally should like to return to the time when Mlle. Lacroix was thought the highest type of beauty. I do not mean the time in its literal sense, for the wealth of varieties was so limited then to what it is now. We have at the present time most handsome kinds of almost every hue of colour.

Mlle. Thérèse Rey, Sunflower, Wm. Seward, the new variety Duchess of York are splendid types of colour and form. Col. W. B. Smith and Lord Brooke, of loose incurved form, are fine examples of showy beauty. Varieties as these require no definition; their merits appeal to every eye.

With me insect pests are less numerous than usual. Green-fly is fairly persistent among the tender points of the stems, but this is easily killed by dusting with tobacco powder. If through neglect we allow our plants to become thickly infested with this or any other pest, damage to good health will accrue. The leaf-mining grub has not yet been found at all, but there is time for it. As late as July I have known it troublesome. Hand-picking is the only remedy I have tried; this is effective. If earwigs are caught now we considerably lessen the likelihood of attacks when our plants are in bud later in the year.

The disposition of the variety Vivian Morel and its sport Charles Davis to develop flower buds early in the year is most marked this season in every case where I have seen the sorts. I fear this habit has become constitutional, and may in time considerably affect the high position obtained by both as exhibition flowers, for we must cut the plants back and by so doing give them a serious check. Fortunately these varieties are very quick growers and in a short time push out other shoots, which will eventually produce handsome blossoms. Late-struck plants are the least affected, and this mode of culture is commended. In any case the mode of procedure is to cut away the portion of the stem which has produced the shoots with buds—this will be about 6 inches in length—to hasten the growth of other shoots.

H. SHOESMITH.

## GARDEN FLORA.

### PLATE 1018

#### CONE-FLOWERS.

(WITH A COLOURED PLATE OF RUDBECKIA MAXIMA AND R. PINNATA.)\*

A FEW years ago the Cone-flowers were all comfortably and contentedly included in one genus, Rudbeckia, but in the new Kew Index we find them again separated into three or four, and the two flowers so gracefully combined in the accompanying coloured portrait are of different genera, the larger being Rudbeckia, and the smaller Lepachys. Must gardeners submit or rebel? It is trying to their patience to find "Genera Plantarum" and Nicholson's "Dictionary of Gardening" so soon superseded, and we will venture here to continue the name Rudbeckia for all the Cone-flowers. These North American composites make fine showy plants for the hardy border, flowering in late summer and autumn. The purple kinds (now again called Echinacea) have, I think, been already figured, and have certainly often been described in THE GARDEN, so I shall mention about eight yellow kinds, confining myself to those with which I am familiar in my garden at Edge. To begin with the portraits:—

R. MAXIMA is a fine, handsome plant growing 6 or 7 feet high, having flowers densely set with broad golden rays and produced in August and September. The large glaucous oval and entire leaf at once distinguishes it from others of the

genus. Being a native of the warmer States of America, it thrives best in warm gardens and in hot summers. I raised many plants of it ten years ago from American seed, and in 1887 and 1893 it was grand, but cold, wet summers, more than the frosts of winter, have greatly reduced the dimensions of the plants, which want renewing from imported seeds.

RUDBECKIA (now Lepachys) PINNATA, the other flower in the portrait, wants no description, as both leaf and flower are so well represented. It grows 4 feet or 5 feet high, flowering from July until hard frosts overpower it. It is not a long-lived plant, getting too hard and woody at the base to continue to break well, so it is better to keep a few seedlings on hand. Seed is abundantly produced and easily raised. Plants flower in the second year, and continue about five years more.

R. CALIFORNICA is the giant of the tribe for size of flower and cone, the flower being often about 6 inches across, and the cone 2 inches high; leaves, flower-stalks, and root are equally robust. The flowers come early in July; they have few and horizontal rays, and are solitary on the stalks, their size making up for their small number, and the whole plant having a majestic appearance. It is better for frequent division, exhausting the soil if left to itself for several years.

R. LACINIATA is the tallest of the Cone-flowers, though not so stout a plant as the last. I have one in a moist, sheltered corner which Mr. Robinson, when visiting my garden a few years ago, said was the handsomest plant I had. It is still flourishing, and grows every year about 10 feet high, though 6 feet or 7 feet is the ordinary height of the type. The leaves, as the name implies, are unevenly divided into narrow ribbons, or cut into larger lobes, different individuals varying much in leafage. The flower is large, the rays curved downwards so as nearly to touch the stalk, and the cone is greenish. Plants live many years without spreading much, but are easily divided, and self-sown seedlings come up round if the seed escapes the green linnets and chaffinches, which delight to eat it.

R. LEVIGATA (nitida?).—About ten years ago a very tall and late Cone-flower was sent to me from St. John's Nursery, Worcester, with the name R. levigata (Pursh.). The sender told me that he had both plant and name on good authority from America. The general habit is that of R. laciniata, but the leaves are less incised than in any of that species; the flowers, though smaller in outline, are more regular and plentiful, and have broader and more golden rays. They begin to open when R. laciniata is over, and continue into November. From a gardener's point of view the two plants are quite distinct. Twice I sent specimens to Kew Herbarium for a name, and twice it was returned as R. laciniata. I also sent living plants to Chiswick, when the Aster conference was held, and to Kew Gardens, but the name R. levigata was not recognised. Asa Gray gives R. levigata (Pursh.) as a variety of R. laciniata. I have lately seen this plant described as R. nitida, but I do not find it agree with Asa Gray's characters of that species. Whatever it is, it is worth growing as a late autumn flower. We must remember that many of these North American composites readily form hybrids in gardens, and this may be one.

R. SUBTOMENTOSA is another distinct species. The flowers show hardly any raised cone; the disc is very black, and the golden rays, about an inch long, continue horizontal, so that it would hardly be taken for a Cone-flower. It grows 4 feet high, flowering late and very freely, and is easily increased by division. Young plants succeed best; when old they are apt, like R. pinnata, to get so hard at the base that large limbs suddenly lose their vital union with the root and wither before flowering.

Two remain to be described, of which the flowers are rather similar, but the habit very different. They are—

R. SPECIOSA, to which gardeners give the unauthorised name of R. Newmanni, though I never could discover why. It is so well known, that I

\* Drawn for THE GARDEN by Miss E. F. Sneyd in the garden of the Rev. C. Wolley-Dod. Lithographed and printed by Guillaume Severeys.







need say little more than advise those who wish it to succeed in hot and dry summers to dress the surface with rich compost and to water it well, or it withers prematurely.

R. HIRTA is said by Asa Gray to be "annual or biennial." It certainly requires frequent renewal from seed. It flowers generally more than once, not often more than twice, but its life is of uncertain duration. It grows generally about 18 inches high and produces a large spreading panicle, each flower being often 4 inches across. Two-year-old plants begin to flower early in June, and continue gay through summer. It is well to select the largest and most golden flowers for seed. This species always attracts notice in my garden from the bright colour of the rays and the good contrast of the black cone. Similar treatment to that given to Canterbury Bells will secure a succession of plants.

Excepting R. maxima, I have, in a long gardening experience, found no difficulty in maintaining a stock of all these Cone-flowers. R. pinnata, R. laciniata, R. hirta ripen plenty of seed every year. I never found ripe seed on any of the others, but they are all easily divided; the whole tribe likes a rich moist soil and a warm aspect. C. WOLLEY-DOD.

Edge Hall, Malpas.

## THE WEEK'S WORK.

### KITCHEN GARDEN.

**TOMATOES.**—The dreaded disease has already appeared in several gardens in this neighbourhood, especially where it has long been the custom to sow home-saved seed. This leads me to think that, as with many other plants and vegetables, so with Tomatoes, a change of seed is very necessary. To guard against the malady a comparatively dry atmosphere must be maintained and above all the syringe never used over the foliage. If growth is fairly strong and fruit sufficiently abundant, let well alone, as too rich top-dressings and liberal feedings are apt also to encourage the disease. Where Tomatoes occupy a house to themselves their special needs can be readily attended to, and I would recommend that afternoon damping down and early closing be not practised. There are few fruiting subjects less affected by insect pests than the Tomato; therefore a somewhat arid atmosphere continually is beneficial rather than otherwise, provided always plenty of root moisture is supplied. Sometimes whole batches of plants are ruined by attacks of wireworm, the same having been in the soil when the plants were potted. The first sign of their presence is a yellowness in the foliage, together with slight flagging during sunshine; this is caused by the worms boring their way up the main stem. The best remedy is to procure some quite fresh horse droppings and spread them thickly over the surface soil of the pots; the smell of these after being watered will entice them down from the stems, when they may be destroyed. The manure should be examined every second morning until a more healthy growth is resumed. I had a batch of plants so affected last year owing to newly-cut loam being used in potting, and the above trap answered well, the plants afterwards growing and fruiting well. Prevention being better than cure, it is always more practicable to use soil at least two years old, as then these pests are more likely to have grown to a discernible size and may be picked out and destroyed. Tomatoes for successional work may still be sown, using single small pots, this being not only better for the plants, but a saving of labour in the end. Place the pots in a moderately warm house until the seed has germinated, then remove immediately to a greenhouse temperature, as coddling at this advanced date when pipe-heated structures run up so high is ruinous.

**ASPARAGUS.**—Where seed for the supply of stock plants was sown in March, as advised, thin-

ning out will now be necessary. This should be done with a free hand, as if left too thickly, much difficulty and damage will follow when the plants are lifted for transplanting. A mulch of rotten manure between the rows will do much towards preserving moisture about the roots, which at present lie very near the surface. Give several good soakings of liquid manure during the growing season. Where beds exist for forcing, growth will now be very far advanced, and the most must be made of the time for feeding the roots to strengthen the crowns for next year's work. Keep down weeds either by hand-weeding or by the application of a little salt twice in the summer, the latter plan, of course, being by far the most economical, salt also helping to keep light porous soils in a moist condition. Nitrate of soda is one of the best manures for Asparagus, if used carefully in showery weather or watered home by watering cans. All Asparagus beds are the better for occasional floodings of farmyard liquid manure at intervals of a month, except where the soil is unusually retentive and in wet seasons.

**SELF-PROTECTING BROCCOLI.**—As a late autumn and early winter Broccoli to succeed Autumn Giant and the later sowings of Walcheren Cauliflowers, no variety can equal Veitch's Self-protecting. The sooner the first batch of seedlings is got out the better, the smaller ones, if a secondary sowing has not been made, being pricked out into a bed and well nourished for three weeks longer for successional work. The Self-protecting, being a very strong grower, needs plenty of room with a rich soil, and as, unlike the ordinary winter and spring Broccoli, which are far more hardy, it will have to be lifted and placed under cover at the approach of sharp frost, a strong sappy growth is no detriment, but rather the reverse. Some growers place the young plants in trenches, and doubtless this is one way of securing the largest heads with, in the end, the least trouble, as once the soil in these gets well soaked, it is an easy matter by an occasional watering to keep it so. Allow abundance of room between each plant, and water the trenches the day previous to planting. See also that the seed-bed is well moistened at the same time, or many of the best fibrous rootlets will snap off in drawing. Examine the centres, as this variety, and, indeed, all Broccoli, will sometimes have a percentage of blind plants. If very hot at the time it will be well to shade the plants for a week with evergreen boughs.

**MAIN CROP CELERY.**—By the time this calendar appears the main batch of Celery will in most places be sufficiently forward for putting into the trenches. Should the weather continue hot and dry, extra care will be needed in transplanting. Newly-formed trenches must be well trodden and then soaked with water a day or two before wanted, and the plants, whether in boxes, frames, or open sheltered nooks, well soaked as well. If taken up, even in a semi-dry state, much of the root soil will fall off, and the plants consequently flag and suffer. Planting completed, water home and afford shade from hot sun. Remove any suckers which may be clustering around the base of the plants and watch for the Celery maggot, which will sometimes appear soon after the young plants are put out into the trenches.

**EARLY COLEWORTS.**—Some people like to have a small batch of this most useful vegetable in early autumn, and in such cases seed should now be sown, the sowing for the principal winter batch being deferred till the second week in July. A sowing of the hardy green variety may be made at the end of July for supplying small heads in spring. Coleworts being very compact in habit may be planted pretty closely together, and if any quarter has been cleared of Potatoes or Peas, the Coleworts may be planted without any further preparation of the ground.

**RADISHES.**—These should now be sown more frequently, as when once the bulbs arrive at their full size they soon become hot and tough. The small Olive-shaped and Turnip varieties are by far the best for this time of year, the position

most suitable being a semi-shaded one and the root-run rich and moist. Strong manure is not advisable, as it is apt to give the Radishes an objectionable flavour, old Mushroom manure being best. Daily waterings are also necessary after the young seedlings come through the ground, dryness being fatal to them. The best way is to sow a small patch once a fortnight, and if the seed is sown thinly the labour of after-thinning is avoided, and birds at this season are usually less troublesome amongst Radishes and small seeds generally.

**ENDIVE.**—Where this is required for a change from Lettuce in early autumn, a little seed may now be sown on a cool moist border. A large number of plants should not be transplanted, as sometimes these extra early lots of Endive will bolt wholesale. The green and moss-curl varieties are by far the best for sowing now, leaving the broad-leaved till the July sowing. Where time and labour are scarce the plants may be thinned out to the proper distances in the seed-bed when quite small, and allowed to stand there.

J. CRAWFORD.

### FRUIT HOUSES.

**EARLY VINES.**—To keep the fruit in the best possible condition early or hard forced Vines must have more air and less fire heat, the amount of the latter being governed by the external conditions. It is important to retain the foliage in a healthy state, and during very hot weather with Vines close to the glass it will be necessary to shade in order to retain the foliage till it has performed its functions. In cutting ripe fruit it is well to clear any rods which may have been infested with insect pests, and then give them daily syringings in the evenings so as to get rid of any insect life which may have escaped. During hot dry weather the houses containing ripe Grapes should have the floors and walls damped twice daily; this will keep the foliage healthy and prevent shrivelling of the berries. Black Hamburg Grapes fully ripe will be best given a light shade during the hottest parts of the day, but Muscats require full exposure if the foliage is healthy. Vigorous canes will make a lot of lateral growth, so go over the Vines frequently, as much harm follows excessive thinning, but little and often is the best policy, as this prevents scalding and the Vines do not miss the growth. In thinning surplus growth allow the terminal shoots more play if there is space for these to extend, as root action is encouraged. In light soil more water may be required, but must be given with care, as the thin-skinned varieties like Foster's Seedling and Madresfield Court crack badly. It is best to thoroughly water these at the colouring period, mulching afterwards and thus retain the moisture. If watering is necessary it should be done early in the day, plenty of air given, and a freer lateral growth allowed for a short time afterwards. Many early Vines are much injured by being kept too dry at the roots at this season, as though forcing is at an end the roots are still active.

**SUCCESSION HOUSES.**—These will now be changing colour and at a critical point, as the Vines will require more fire heat with dull or wet weather; more air must be given also and a drier atmosphere maintained, though damping down most days will be necessary, in all cases the external conditions being the chief guide. Perfect berries, and as large as possible, can only be obtained when there is no check given, and it is the safest plan to admit a good circulation of air, at the same time giving warmth in the pipes. As soon as colouring begins leave air on the ventilators all night. A little on the front ventilators will greatly assist the colouring, and a chink on the back ventilators late in the evening will prevent sweating or moisture on the berries early in the day. The temperature for houses at this stage should now be 75° to 80° by day, the house being closed in good time and the thermometer running up to 90° or 95° for Muscats, giving 75° at night and 5° less in mixed houses. If air is given at night there will be less fear of scorching

early in the day. In all cases admit air early and in small quantities at a time. This creates a genial atmosphere; whereas high temperatures and sudden rushes of cold air cause mischief, disease, and favour insect pests. Watering at this point is important, and must be given liberally in shallow borders, doing the work just as the berries show colour. It is best to give tepid water, and if the surface is at all hard pierce it lightly with a wide-pronged fork. Give liquid manure at this stage, or, failing this, a surface-dressing of a good fertiliser, such as Thompson's Vine manure, washing it down to the roots. A good mulch should then be given, and another watering in a few days, which will keep the mulch moist and the roots moving freely to support the fruit to the finish, as Grapes never colour well when dry at the roots or in a dry atmosphere. Allow lateral growth of Muscats more freedom, stopping gross shoots, but allowing weaker ones to grow on, and feed freely with liquid manure. Early ripening of this choice Grape should be the first consideration, as it keeps better.

**LATE VINES**, such as Lady Downe's and others, will now be set or setting, and in many houses ready to thin. In thinning late kinds it must be remembered they have to hang a long time, and unless well thinned they cannot keep well. Large-berried kinds, such as Gros Colman, require several thinnings, and at least three thinnings should be given large bunches required to keep sound into the new year. Mrs. Pince, Alnwick Seedling, Alicante, and Lady Downe's all set such a profusion of small, stoneless berries that much care is required to remove these to allow those swelling room to develop. Watering and feeding the roots should follow thinning. Outside borders will be drier than usual with the little rainfall we have had through the spring months, and such borders will now take liquid manure and other food freely. The temperature in this house should not fluctuate much. Avoid cold winds, and in wet weather keep up a genial warmth in the pipes, with air on the ventilators to prevent scalding and rust.

**POT VINES**.—The roots of those for early forcing having reached the sides of the pots, they may now be fed freely, and the lateral growth stopped at the first joint from the cane: these later on can be cut quite close to the cane, but by allowing them to remain at present, the buds at the base swell more freely and the canes are strengthened. Mulching canes well advanced will save watering and promote strong growth, and there should be no lack of atmospheric moisture, with the house closed early and the canes well syringed. Small plants struck late should now be given a shift into 6-inch pots: these will make good material for another season if kept growing in a brisk heat.

**PLANTING VINES**.—It is not too late to plant young Vines struck for this purpose if the house is in condition for the plants. I have often taken a crop in May and in early June planted new canes. Those who have Vines in a bad state may with advantage plant now and grow on freely. Small houses may often be utilised for a crop of Grapes. Those planted in small borders may be fruited the following season, and they force much better than pot Vines. They may not be quite so early, but they carry a better crop. In planting spread out the roots freely—plant firmly—shading for a short time and close early, keeping close for a short time, and grow in a brisk heat with plenty of moisture, stopping all lateral growths at the first joint. Should the plants make a weak start, stop the leader at a few feet from the base and train up another leader; this will give increased strength. As regards the final length of canes much depends upon the size of the house—8 feet to 10 feet is a fair length, and the former will carry half-a-dozen nice bunches.

**VINE PESTS**.—Red spider is the most common pest among Vines, but is soon got rid of by using sulphur, either by sponging or coating the pipes with sulphur. The first named is safest and a sure cure if the leaves are lightly sponged when the pest first appears. If the pipes are covered the crop should be well advanced, but a moist

atmosphere will do much towards keeping the foliage clean. The pest usually makes headway whilst the fruit is hanging in a ripe state, so that it is necessary to keep the foliage clean up to that period. Thrips also make their appearance at this season, and in addition to spoiling the foliage, mark the berries also if not soon cleansed. Sponging with a little soft soap and tobacco water is the best preventive, and in badly affected cases fumigating is necessary, but this is risky unless done carefully by several light fumigations in succession. Mildew is the worst Vine disease, and must have speedy attention when it appears. Vines with fruit well advanced are more difficult to deal with in these cases. Sponging all affected leaves with soft soap and sulphur mixed, or Bentley's mildew specific will get rid of the pest in its early stages, but this is not sufficient. The pipes should be painted over with thick sulphur solution and the house kept drier for a time. In mixing add a little oil to the sulphur, causing it to adhere to the pipes. After resorting to the above air carefully for a time to keep up a brisk temperature, and the pest will not spread. Should the bunches be infested cover lightly with dry sulphur: this may be washed off after a time and will not affect the berries if carefully syringed. Mealy bug may be troublesome, but this can be got rid of by persistent efforts. When the Vines are at rest is the best time to war against this enemy, but if present now, by going over the canes twice a week with a soft brush dipped in methylated spirit the pest may be kept down.

G. WYTHES.

## KITCHEN GARDEN.

### LEEKS.

IN seasons of plenty the above vegetable is often despised, but in such winters as we have recently experienced the Leek is most valuable, being more hardy than most vegetables, and after a protracted frost mild in flavour. Although Leeks are not so popular in the south as in the north, I feel sure they will have been a welcome addition to the supply this spring in gardens where hitherto there was little demand for them. They are deserving of extended culture, as they are most wholesome and form a really tasty dish when well served. In a note on the value of this really useful vegetable I do not intend to go at length into the details of culture for exhibition, but to treat of ordinary culture for home use and to name a select few.

Of late years we have had several additions to the list of kinds, some noted for their length, others for their thickness. Length may be an important point for exhibiting, but for ordinary use I prefer those thick at the base and uniform in size, as when prepared for cooking there is less waste. For mere flavouring, the green tops are all that is required, and for this purpose the plants are grown thickly. Those who require exhibition plants raise them early in the year, sowing the seed in heat; but as the plant is very hardy, by sowing in mild weather at the end of February or early in March on a warm border, covering the bed with mats in frosty weather, roots may be had for winter use quite large enough if well fed during the growing season. Now is the time that the earliest lot of plants should receive attention. The best mode of growth is in deep drills on heavy land and in trenches on light land, much the same culture being required as for Celery. In growing exhibition Leeks, the plants are usually pricked out into boxes and ready for their permanent quarters by the middle of May, but as I am dealing with them as an ordinary crop, I will only touch upon the necessary culture. Plants sown in the open

should always have plenty of space to develop, as sturdy plants with ample roots do not receive a check like weak, crowded ones. They delight in good solid manure dug into the trenches, with ample supplies of moisture and liquid manure as growth increases. In planting, the roots should not be twisted or bent in any way, but placed quite straight and made firm in planting.

I advise trenches on light land for various reasons, the chief being, moisture and food can be more readily given to the plants, and moulding or blanching is less difficult. Excellent results may be obtained by growing on the surface if due attention is paid to manuring and watering, with abundant food during growth, but even then it is advisable to plant in shallow drills drawn 2 feet apart. The plants, if a large kind or planted early, should be 10 inches to 12 inches apart. Many do not mould up in the old-fashioned way with soil, but bandage the stems; others use drain pipes and fill in with cocoa fibre or fine soil, but for ordinary use moulding up with soil will suffice. It is advisable to make two or three plantings where this vegetable is liked, the last on a cool border, as the produce will last well into June the following year if lifted in May and placed in a shady, moist border well manured. For early lifting I prefer the Lyon types, whilst other good sorts are Dobbie's Champion and Ayton Castle, all three being specially adapted for exhibition, early winter use, and noted for their mild flavour. For late use the older Musselburgh is difficult to beat, and, to show its hardy character, we have it quite sound and good at this date. It is large, of good flavour, the last to run to seed, not so thick at the base as the Lyon, but superior for late use. There are other varieties, but I consider the above selection the best for use from November till June, and, if given good culture from the start, few vegetables will give a better return.

G. WYTHES.

**Bolting in Cabbages**.—In THE GARDEN of May 25, p. 363, "J. C.," Newark, writing on Cabbages bolting, praises Ellam's as an early Cabbage on account of its freedom from bolting. Whether it is the variety or the mode of culture I am not prepared to say, although I believe too early sowing of the seed is often the cause; but whereas in other gardens bolting is more or less strongly in evidence year after year it is almost unknown with us, and I depend almost entirely upon Ellam's for winter planting. It is large enough for most purposes, is good in quality, comes early, and by planting 18 inches each way, nearly as large a weight can be taken off a given piece of ground as by planting larger growing sorts. This year I am trying Sutton's Favourite, with which I am much pleased. It is solid, compact, very early, and not one of the plants have bolted. Although we have many varieties of Cabbage already, I think this variety will be largely planted as soon as its merits become known.—WM. HARRIS, *Uproot*.

**Pea Gradus**.—As a good early Pea I can strongly recommend Gradus. For some years past I have always sown Duke of Albany in pots, planting out when ready; but Gradus is much earlier and dwarfer, with large pods of a very distinct Marrow type. It may be asked, why sow Marrow Peas at the end of the year when better results are secured from the smaller varieties of the Chelsea Gem section? But such varieties as the Duke or Gradus soon fill the basket, are more appreciated in the kitchen, and as they are only a few days behind the smaller kinds, give a better return for the same culture. On heavy clay soils it may not be advisable to sow large Marrow Peas at the end of the year, nor do I advise sowing in any soils at that date in the open ground, as good results cannot be expected in our fickle climate. My plan is pot culture, and those

who grow in pots to plant out early in spring well know how admirably such Peas succeed if not forced too hard and attended to when planted. The fine plants at the Temple show proved how well Peas force, but there must be ample time allowed. I find when Peas are sown in good-sized pots and brought on very slowly there is less check at planting and they soon go away grandly. Gradus is a 3-foot Pea, with a large, full pod and of splendid flavour. To show its earliness, I have this season plants podding freely from seed sown in the open the end of March. It is certainly the earliest of the large Marrow type I have grown, and when planted out of pots at the end of March in an average season, a crop may be assured within two months from time of planting. I have named Duke of Albany as good when forced, but Gradus is a decided improvement in height of haulm, earliness and free cropping; indeed, in this latter respect it is superior, as though the Duke crops freely, it comes in all at once; whereas the newer variety is equally free and lasts longer in bearing.—G. WYTHES.

**Early Potatoes.**—An early Potato should combine earliness with productiveness and good quality, and in my experience, after a fairly numerous trial of sorts over a number of years, there is nothing better to be had than the three following sorts, viz.: Ringleader, Early Regent, and Puritan. They come in fit for use in the order named, and invariably yield a heavy crop of good even tubers of first-rate quality. We do not want to grow a number of varieties, but a few reliable sorts in quantity. In the above trio the gardener who has a large family to provide for has three Potatoes of undoubted merit, which will prove alike satisfactory both to himself and his employer.—W. M. HARRIS, *Upcott*.

**Mulching and watering Asparagus beds.**—With protracted drought the Asparagus crop on light soils or in raised beds will be light, but it may be greatly assisted by mulching and watering afterwards. Spent Mushroom manure is of great value as a mulch for this crop in such seasons, and if well watered once a week after mulching there will be better and more succulent grass. I would also advise dressing with fish manure before applying the mulch, as it is a grand fertiliser; or, failing this, use salt freely and water it in, as this will keep the surface free of weeds, in addition to supplying nutriment. New plantations should likewise get attention. If on the flat, with a wide space between the rows, it is an easy matter to place litter close over the roots, or if in beds, to cover the beds. This will greatly assist root action and prevent dryness, and one thorough watering will tide the plants over a long time. Asparagus is not nearly as good in flavour when grown on a dry hot soil, and is much smaller in size than when assisted by mulching and watering.—S. M.

#### SOWING WINTER ONIONS.

LAST autumn I intimated my intention of sowing a portion of my Tripoli Onions on a plot occupied for two years previously by Strawberries, a friend having told me that very fine Onions that had thin necks and kept well were annually grown on a similar plot in one garden in this county. The seed was sown the second week in August, the variety being Sutton's Leviathan, and the surface of the old Strawberry bed was so hard, that it was with difficulty the drills were drawn out. The seed germinated rapidly, and as soon as the young Onions would bear handling their numbers were reduced, the final thinning being left, of course, until spring. Another plot was prepared in the ordinary manner, with plenty of manure, and seed of the same variety sown on the same date. After the Onions had grown to a good size in October we had several gales of wind, the result being that many of the plants on the prepared plot of ground were much loosened at the base; whereas all those on the firm ground remained unmoved. I thought this an advantage at the time, as my

experience is that once autumn-sown Onions become loosened through wind at the bottom, frost, should it prove severe, is certain to play havoc with them. It may interest some to know that not one blank occurred through the frost in the row sown on the old Strawberry bed, and that at the present time these are much more shapely and larger bulbs than those on the other part, while only one or two thick necks are to be seen. In reply to some remarks on this subject last autumn, the editor stated that in one garden in Scotland where spring Onions had always failed an old Strawberry plot was heavily mulched in autumn with rich manure, the strength of which was washed in by the winter rains. This was raked off in spring, and without any further preparation the drills drawn and the seed sown, with the result that Onions of the finest size and quality were produced. Some years ago old gardeners used to grow many of their spring Onions on slightly raised beds, having a narrow alley between, and if by chance a seedling came up in the hard alley and was allowed to grow, it always made a larger bulb and had a better neck than the majority of those on the beds. These combined facts prove, I think, that Onions enjoy and, indeed, require a firmer surface and root-run than can be secured by any treading or even rolling. Certainly those who have much difficulty in growing this important crop might, if practicable, give the old Strawberry bed system a trial. If winter Onions are to be sown and the surface cannot therefore be mulched with manure, then feed liberally with liquid manure when in full growth.

J. CRAWFORD.

**Turnip Orange Jelly.**—I do not think the merits of this Turnip are as universally known as they should be. For July, August and September use it has few equals, standing drought well and seldom running away to seed. Moreover, where a yellow-fleshed variety is not objected to, its flavour will be found irreproachable. Where Turnips are wanted for exhibition during the above named months, Orange Jelly is a capital sort to grow, as so many of the white section are liable to develop foul tap roots during hot weather and to become infested with the Turnip grub, which entirely spoils them for the purpose. Although I look upon the old Chirk Castle as the best all-round winter Turnip, yet Orange Jelly is a fitting companion, and gives a pleasing change on the dining table. Like all other Turnips, it needs a cool moist border and liberal thinning.—J. C.

**Winter Spinach.**—Although of course the seed will not be sown till August and September, the present is a very good time to take the preparation of the plot intended for this important crop in hand. In soils infested with wireworm, a good quantity of gas-lime may well be dugged in, and afterwards a little more, to which may be added burnt garden refuse, wood ashes and a little root, sculled in immediately beneath the surface. There will then be sufficient time between now and sowing to allow of the strength of the uppermost dose to wash down to that which was dugged in. In ground so prepared the pest seldom attacks Spinach roots, and the above ingredients, having by sowing time lost much of their strength, act as a good fertiliser to the crop. Ground on which early Cauliflowers have been grown will do well, it being necessary to clear off the old stems as soon as the crop is cut, as leaving them in the ground after this only tends to impoverish it.

**Cauliflowers.**—I do not think that we shall easily beat the Early London Cauliflower for sowing in the autumn and for cutting before Peas come in. For use in private establishments varieties of the Snowball type may be good, but they are of little use for market, being generally too small. Early London is at least a fortnight earlier than Walcheren if sown at the same date, and this makes all the difference in prices, as the market value of Cauliflowers drops considerably as soon as Peas can be obtained. We have been cutting this variety from autumn-sown plants for

the past ten days, commencing on May 24, and Walcheren is only just ready. I do not wish to say a word against the latter variety, as it is one of the very best kinds of which to make successive sowings; but where earliness combined with good size is required, Early London must be grown. The Pearl has often been praised in your pages, and to come in succession to early varieties nothing can be better. If this is a selected stock from Walcheren—as it is generally supposed to be—it is very distinct and true, being dwarf and compact, the heads of good shape and colour. I have never met with much success from autumn sowings of the Autumn Giant type, and though this has been recommended I cannot think it advisable in gardens where the soil is light. These big Cauliflowers appear to me to want the cooler days and nights of autumn to bring them to perfection, and I can see no necessity for growing them for early work.—J. C. TALLACK.

**Tomato Duke of York.**—At the Southampton show held on Whit Monday, Mr. T. Hall, gardener to Sir S. Montagu, Bart., M.P., exhibited in his first prize collection of vegetables a dish of handsome fruit of this Tomato. They were not large, but perfect in shape and of really good colour. Such fruits as these are preferable in every respect to the large corrugated, rough samples too often met with.—E. M.

**Prickly Spinach in summer.**—Mr. Young's experience with the prickly Spinach sown in summer will be of service to those who find a difficulty in growing this vegetable during hot weather and on certain soils. His note also reminds me of the fact that the summer Spinach is equally good for sowing in autumn for a winter supply; in fact, a bed of it did me more service by far last spring than did the ordinary winter variety, it standing the frost better and producing larger and better leaves. A friend of mine told me it was his practice always to sow the summer variety in autumn. This rule holds good with other subjects, notably with Spanish or so-called spring Onions.—J. CRAWFORD.

#### MAY IN SOUTH DEVON.

THE temperature for the last month has been decidedly high, the mean average being 54.5° against 51.8°, which is the average for the last sixteen years. In May, 1894, the temperature was 50.9°. The thermometer on the grass has not once fallen to freezing point, the nearest approach being on the 2nd, when 35° was registered.

Rainfall amounted to 0.66 of an inch, the average for May being 2.29 inches, and the rainfall during May, 1894, 2.43 in. The total amount of the rainfall since January 1 is 10.31 inches, against 12.65 inches for the corresponding period of 1894.

The amount of sunshine registered was 298 hours 35 minutes, against an average for May of 219 hours 35 minutes, and a record of 203 hours 50 minutes last year, the total amount registered for the five months of 1895 being 790 hours 15 minutes against 706 hours 25 minutes for the same months in 1894. As regards wind, May has been a quiet month, quieter than any of the preceding thirteen. The total horizontal movement was 4637 miles and the greatest hourly velocity was attained on the 15th, when a rate of 31 miles per hour was recorded. It is curious to note that, although with a lessened rainfall of 1.77 inches compared with May, 1894, the mean humidity of the past month has been greater, that of May, 1894, being registered as 72 per cent. and that of May, 1895, as 73 per cent.

The flower garden in May is not entirely bereft of Narcissi, poetical recurvus and plenus lingering, till the June days begin, in shady spots where the Virginian Cowslip (*Mertensia virginica*) hangs its drooping heads of turquoise blue. In the Lily bed, where a dozen varieties are making good growth, only one, *L. pyrenaicum*, is yet in bloom, a pretty Lily with its chrome-yellow Turk's-cap and red anthers, but not one to be used for indoor decoration on account of its unpleasant scent. A clump of the Wood Lily (*Trillium grandiflorum*)

has been a beautiful sight. The flowers become more numerous and larger with each succeeding year, and the chaste loveliness of their snowy petals standing out from the green setting of the wide leaves should commend them to all flower-lovers. Peat or leaf-mould should enter largely into the composition of the soil in which they are planted, and a situation in the partial shade should be given them. In the herbaceous border *Doronicum plantagineum excelsum* in masses has been a fine sight, its large yellow stars in hundreds glowing against a dark background of evergreens. *Dicentra spectabilis* is also very decorative when well grown, but as it becomes unattractive when the flowers are faded, it is well to arrange the border so that plants later in making their growth, such as Michaelmas Daisies, perennial Sunflowers or the like, should hide the *Dicentras* during the latter portion of the summer. Lupins, white, blue and purple, are at their best in May, while by the water blue Monkshood and Solomon's Seal flourish abundantly, the latter also growing on the banks in the wild garden with wood Hyacinths and Stars of Bethlehem. The yellow Day Lily (*Hemerocallis flava*) blooms throughout the month; the flowers, as evanescent as their faint perfume, closing after one day's life, but the scapes are many-blossomed and the individual deaths are scarcely noticed.

Beneath a tall specimen of *Aralia spinosa*, that throws out a spread of Palm-like leaves, white Violas mingle with hybrid *Aquilegias*, the combination of colours in some of the latter being most exquisite. The strongest seedlings, which are the earliest to bloom, may generally be pulled up and consigned to the rubbish heap, as they usually produce coarse, double flowers. Those that come later are often of exceptional delicacy, both of form and colour; dark yellow corollas contrasting with violet or red perianths, white with blue—gradations of pale pink, cream, silvery grey, faintest saffron and dead white—very poems of colour; while the shapes are equally diverse and pleasing—some with the spurs long, slender and straight, others with the extremities turning inwards, giving the effect of the bird-neck of dove (Columba) or eagle (Aquila), from which the flower takes its dual names.

The Lily of the Valley beds have never before given such a bountiful supply of bloom, tall, large-belled spikes having been gathered by the handful for indoor use, the rooms and passages of the house being filled with their delicate fragrance. One of the sweetest scented flowers that blows—the old double white Rocket—is also a May, or rather a May and June flowerer. A clump of a dozen plants has thrown up fine heads of bloom amongst a colony of *Geum coccineum*, the scarlet of whose flowers sets off the lavender-tinted white of the Rockets. On an evening after a shower this corner of the garden is absolutely filled with perfume. Rockets are now seldom grown in the gardens of the rich, but are often to be found in abundance in those of the poor, the cottager's taste being conservative in garden matters. A space of the rockery has been covered with the *Gentianella's* blue of blues, while *Aubrietias*, *Alyssum*, *Rockfoils* of many kinds, *Veronica prostrata*, *Mimulus* and *Myosotis palustris* have added their varied tints to the green of the young Fern leaves and the red-grey of the stones. At the foot of the rockwork, where the water runs away in a cup-shaped hollow, the variegated Water Flag grows, and is in the spring a striking object. With the advent of summer, however, the variegation is lost, but the broad, sword-shaped leaves are always handsome. A *Wistaria*—whose trunk is as thick as a man's leg—which rambles along the top of an old wall 60 feet in length, has roofed the Lichen-covered stones with pale purple scented flower-eaves fully 2 feet deep. *Laburnum*, lilac and pink Thorn have bloomed profusely, as has *Choisya ternata*, which seems totally uninjured by the past severe winter. Single *Deutzia* and *Guedler Rose* have also blossomed well; *Clematis montana* and *Honeysuckle* festooning arches and wreathing the trunks of some old hollow trees with the delicate tracery of

their flowering tendrils. A large-flowered white *Clematis*, possibly *alba magna*, which has mingled with the *Devoniensis* by the porch, has usurped almost the whole of the trellis for the display of its great stars, which have now ascended as far as the upper windows. Roses on the walls have been giving unsparing supplies of flowers. A *Safrano* on a southern exposure, from which a handful of perfect buds was picked on December 30, was the first to bloom, commencing on May 2. Then in quick succession came yellow and white *Banksian*, *Rève d'Or*, *Rubens*, *Niphetos*, *Gloire de Dijon*, *Devoniensis*, *Mme. Lambard*, and *Gloire Lyonnaise*, and on the 30th a beautiful *Mme. Lambard* from the open bed. Four varieties of Poppies have been in flower, clumps with a dozen or more great blooms of the giant Oriental Poppy (*Papaver bracteatum*) a blaze of vivid scarlet. The sight of this Poppy reminds one of Ruskin's words, "Wherever men are noble they love bright colour, and wherever they can live healthily bright colour is given them in sky, sea, flowers, and living creatures." The graceful Welsh Poppy (*Meconopsis cambrica*), with drooping yellow heads and deeply-fretted foliage, outlines year by year the rough stone edging of a portion of the wild garden, reproducing itself without interference. *Papaver pilosum*, a little-known Poppy, whose fragile brick-coloured blossoms are borne in great profusion throughout the spring and summer, is also a May subject, and being hardy and easily increased should be added to any collection not possessing



*Gypsophila cerastioides*.

it. The Iceland Poppies, orange, white, and yellow, make patches of colour here and there; patches whose edges have been irregularly widened by self-sown seedlings. It is, perhaps, to the *Paeonies* and the German *Irises*, however, that May should rightly belong, since these give but little of their splendour to other months. New Tree *Paeonies* are now raised in such quantities that one's favourites are soon elbowed out into the "general collection," but *fragrans*, *lactea*, *Louise Monchelet*, *Reine Elizabeth*, and *Triomphe de Vandermael* are all excellent varieties, carrying flowers of taking shades that dwarf those of the old *Paeony Moutan* into comparative insignificance. The herbaceous section are no less decorative, from the old double crimson and rose forms down to the pure single white flowers of *P. albiflora* and *P. Emodi*. German *Irises* have for the most part bloomed excellently, there having been an almost total absence of wind and rain to mar their petals. A pleasing effect has been obtained by the planting of a mass of *Iris flavescens* by the side of *I. pallida*, the light yellow of the former contrasting delightfully with the pale mauve of the latter. All the rest of the *I. germanica* section, twelve in all, flowered well with the exception of *I. Princess of Wales*, the best white, which, seemingly, has a poor constitution. *Bambusa viridi-glaucescens* is sending up strong shoots as proof that the winter has not harmed it, but the great standard *Magnolia grandiflora*, which bore over 200 flowers last year, will have none this.

In the warm spring evenings when the sunlight shone through the young green of the Beech leaves—which, indeed, is one of the most beautiful sights in Nature—when the woodquests sailed round in the still air or cooed to their mates in the immemorial Elms, and the cream-coloured doves darted swiftly across the lawn to the ivied Walnut tree in which they had built their first *al fresco* nest; when long shadows lay upon the Grass and the day was going to its perfumed rest, one counted those as lost hours that were not spent in the garden. S. W. F.

#### GYPSOPHILA CERASTIOIDES.

THE *Gypsophila* best known in gardens is the graceful spreading *G. paniculata*, so elegant when arranged with other cut flowers, but the family contains several other pretty species, one of which is here shown. *G. cerastioides* is a charming rock plant, only growing about 2 inches high, but spreading about in a pretty way, the slender shoots clothed with narrow leaves an inch or more in length, the flowers appearing in their axils in small clusters. They are about half an inch across and white, with slight streaks of violet. It comes from the north of India, is the finest flowered kind in cultivation, and a fast growing plant in a suitable open position. *G. prostrata* is also a charming species, of a trailing habit, its flowers, white or pink, borne in loose panicles late in summer.

#### BOOKS.

##### LES PLANTES BULBEUSES TUBERCULEUSES ET RHIZOMATEUSES ORNAMENTALES DE SERRE ET DE PLEINE TERRE.\*

THIS is very well done by a practical man. The cultivation of these plants is dealt with in the first place, and the rest of the work is an alphabetical arrangement in which generally a very sufficient account of each plant is given. It is a useful little book, and will, we hope, be duly translated into English at no distant date. If we have any fault to find, it is with the names which are given under some of the cuts, and which would lead to some confusion, as, for instance (p. 374), *Iris reticulata* is not properly named after M. Dammann. As an example of the author's method we take the genus called *Crinum* (p. 176):—

*CRINUM* (Linn., *Crinole amaryllidées*; *C. abyssinicum*, Hochst.; *Abyssinia*, 1892).—Leaves long, erect, stalk stout, 16 inches to 24 inches in height, ending with an umbel of from six to eight horizontal-limbed white flowers; the pipe is arched and about 4 inches to 6 inches in length. A very handsome plant.

*C. AFRICANUM*.—*Vile Agapanthus umbellatus*. *C. AMABILE* (Don., *C. superbum*, Sumatra, 1810).—Medium sized bulb, the neck long. Leaves erect and lance-shaped, in length 1 yard to 1½ yards, and in breadth 4 inches to 4½ inches; the stalk, from 32 inches to 1 yard, is depressed and bears an umbel of fifteen to twenty strongly perfumed flowers; the pipe is 4 inches to 4½ inches long and bright red, the limb of equal length and rose-pink. It is a summer-blooming hothouse plant.

\* "Les Plantes Bulbeuses, Tuberculeuses et Rhizomateuses Ornamentales de Serre et de Pleine Terre." Par D. Guichenot. Avec 227 figures. Octave Doin, 8, Place de l'Odéon, Paris.

*C. AMERICANUM* (Lin., Centr. Amer., 1752).—Oval-shaped bulb, the neck short; leaves arched and from 28 inches to 36 inches in length; the stalk from 20 inches to 28 inches, terminating in an umbel of four to six white sweet-smelling flowers; the pipe 4 inches to 4½ inches in length, with limb of same length. A summer-blooming hothouse plant.

*C. AMENUM* (Roxb., India, 1807).—Round thick bulb. A summer-blooming hothouse plant with very sweet-scented pure white flowers, the pipe a greenish rose colour.

*C. AQUATICUM* (Burch.).—*Vide C. campanulatum*.  
*C. ASIATICUM*, Lin., *C. toxicarium*.

*C. DECLINATUM* (Trop. Asia, 1732).—Thick bulb, 4 inches across by 6 inches to 8 inches long; the leaves each a yard in length; stalk depressed, 20 inches to 24 inches and terminating in an umbel of twenty flowers; the pipe greenish and 4 inches in length, the perianth white. Greenhouse plant and also hardy.

*C. AUSTRALE*.—*Vide C. pedunculatum*.

*C. BALFOURI* (Baker, Secotra, 1880).—An October-blooming greenhouse plant with sweet-smelling pure white flowers.

*C. BROUSSONETTI*.—*Vide Amaryllis Broussonetti*.

*O. CAFFRUM*.—*Vide C. campanulatum*.

*C. CAMPANULATUM* (Herb.), *C. aquaticum* (Burch.), *C. caffrum* (Herb.), the Cape, 1817.—Oval-shaped bulb, the leaves a yard long, the stalk 24 inches long and terminating in an umbel of from five to six flowers of a brilliant red colour. A hardy plant, but difficult to bloom.

*C. CANALICULATUM*.—*Vide Amaryllis pedunculata*.

*C. CANDELABRUM*.—*Vide Amaryllis orientalis*.

*C. CAPENSE*.—*Vide C. longifolium*.

*C. CAREYANUM* (Herb., Mauritius, 1821).—A very thick globe-shaped bulb, the leaves and stalk each 12 inches long, terminating in an umbel of five to six white flowers, with reddish stain. Hothouse and greenhouse plants, blooming in autumn.

*C. COLENSOL*.—*Vide Crinum Moorei*.

*C. DECLINATUM*.—*Vide C. asiaticum*.

*C. DISTICHUM* (Herb., Sierra Leone).—Small-sized bulb, leaves and stalk each 12 inches long, very large single flowers in summer, 8 inches in length and a bright red colour, grown in the greenhouse with a moderate temperature.

*C. ERUBESCENS* (Ait., Trop. Amer., 1780).—Globe-shaped bulb, leaves 32 inches and stalk 24 inches in length. A greenhouse plant, producing in summer an umbel of ten to twelve flowers, a purple-red colour.

*C. FALCATUM*.—*Vide Amaryllis falcata*.

*C. FORBESIANUM* (Herb.), *Amaryllis Forbesi* (Lindl), Delagoa, 1824.—Very thick bulb, 6 inches to 8 inches in diameter, the leaves from 1 yard to 1 yard 10 inches, the stalk 24 inches long. A greenhouse plant, blooming in October, producing umbels of thirty to forty very large, white, highly-scented flowers, reddish on the outsides.

*C. GIGANTEUM*.—*Vide Amaryllis ornata*.

*C. HERBERTIANUM*.—*Vide Amaryllis ornata*.

*C. KIRKI* (Baker, Zanzibar, 1879).—Globe-shaped and very thick bulb, the leaves 1 yard and the stalk 20 inches in length. A hothouse plant, blooming in October and bearing an umbel of fifteen to twenty very long, white, rose-tinted flowers; the pipe greenish and the limb deflected.

*C. LONGIFLORUM* (Herb.), *C. capense*, *Amaryllis longifolia*, the Cape, 1816).—Very thick bulb with the neck much extended; leaves glaucous, numerous, and a yard long; the stalk of equal length. Blooms in July and August, producing an umbel of twelve to fifteen large, sweet-smelling, infundibuliform (?) white flowers, the outer parts being rose colour. This is the hardiest of all the *Crinums*.

*C. LONGIFLORUM ALBUM*.—A variety of the preceding, having pure white flowers. This is one of the finest of the hardy species and no garden should be without it. Plant in deep light soil on a warm situation. In winter surround the bulb with sand and cover with dry leaves or Moss. Increased by division of the bulbs, which root in pots in beds.

*C. LONGIFOLIUM*, Thunb.; *Amaryllis longifolia*, Linn.; the Cape, 1752.—Very thick bulbs; the leaves 20 inches to 1 yard in length. Stalk 12 inches to 20 inches. A very beautiful plant, bearing in summer eight to ten flowers, stained red, 3 inches to 4 inches in length, with pipe of same length. Culture: plant in the open air like *C. longiflorum*.

*C. MACKENI*.—*Vide C. Moorei*.

*C. MACOYANUM*.—*Vide C. Moorei*.

*C. MACOWANI* (Baker, Natal, 1874).—Bulb 8 inches to 10 inches in diameter, leaves 32 inches to a yard in length, stalk 1 yard. Flowers in November, producing an umbel of twelve to fifteen large-sized scented flowers, each 6 inches to 8 inches long, and white tinged with purple. It is best grown in a pot, having regard to the lateness of its bloom.

*C. MAKOYANUM*.—*Vide C. Moorei*.

*C. MOOREI* (Hook.), *C. Colensoi*, *C. Mackeni*, *C. natalense*, *C. Makoyanum*, Natal, 1874.—Thick bulb, the neck long; leaves a yard long, stalk 24 inches long; summer-blooming, producing an umbel of eight to ten flowers; the stalk long and greenish; perianth white and stained red. Requires the same treatment as

*C. LONGIFLORUM*, *C. natalense*.—*Vide C. Moorei*.

*C. NERVOSUM*.—*Vide Eurycyclus amboinensis*.

*C. ORNATUM*.—*Vide Amaryllis ornata*.

*C. PEDUNCULATUM* (R. Br.), *C. australe*, *C. canaliculatum*, *C. taitense*, Australia, 1790.—Thick bulb, leaf a yard long, stalk 32 inches; summer-blooming greenhouse plant, producing umbels of twenty to thirty flowers; the pipe greenish, wide opened white segments.

*C. PETIOLATUM*.—*Vide Amaryllis ornata*.

*C. POWELLI*.—A hybrid of *C. longifolium* and *C. Moorei*; flowers reddish; grown in the greenhouse for trial out of doors.

*C. PURPURESCENS* (Herb.), Fernando Po, 1826.—Oval-shaped, medium-sized bulb, leaves 28½ inches long, stalk 12 inches; a summer-blooming hothouse plant, producing an umbel of six to eight wine-red flowers.

*C. REVOLUTUM*.—Hybrid; medium-sized delicately tinted flowers; the pipe long and white, each petal divided in the middle by a violet-rose-coloured stripe. Blooms in August.

*C. RIPARIUM* (Herb.), *Amaryllis cinnamomea*, W. Africa.—Leaves 32 inches to a yard long, undulating, and tinged with red; stalk 1 yard; bears an umbel of fifteen to twenty highly odorous flowers of deep purple colour, edged with white. Cultivate in the greenhouse for trial in the open air.

*C. ROOZENIANUM* (O'Brien, Jamaica, 1881).—Flower red outside and white within. For the hothouse.

*C. SANDERIANUM* (Baker, Sierra Leone, 1884).—Brown Pear-shaped bulb, 4 inches in diameter, and neck long; leaves few and close; stalk depressed, 20 inches long, terminating in an umbel of four long-petalled white flowers, 6 inches to 8 inches long, the divisions narrow and the centre stripe a brown-purple. Under glass, with moderate temperature. Time of bloom not fixed.

*C. SPECIOSUM*.—*Vide Amaryllis purpurea*.

*C. SUPERBUM*.—*Vide C. amabile*.

*C. TAITENSE*.—*Vide C. pedunculatum*.

*C. VANILLAGORUM*.—*Vide C. giganteum*.

*C. YEMENENSE*.—Bulb very thick, with long neck; leaves numerous, waving, and a yard in length; bears in summer on a stout stalk ten to twenty flowers, the pipes of which are very long. In winter under glass, with moderate temperature or greenhouse; in summer, the open air.

*C. YUCIFLORUM*.—*Vide Amaryllis Broussonetti*.

*C. ZEYLANICUM*.—*Vide Amaryllis ornata*.

*C. TOXICARIUM*.—*Vide C. asiaticum*.

HOTHOUSE SPECIES.

Plant in roomy pots on free, sandy, light, but rich dry soil. After the plant has rested keep the atmosphere warm and humid; apply a little liquid manure on the appearance of the floral stems. The bloom is of very long duration. When the flowers begin to fade decrease by degrees the waterings and keep the plants compara-

tively dry for two months, not, however, to the extent of making them suffer. This period of repose is necessary to assist the development of the floral stems. Re-pot every two years at the end of the period of repose. These beautiful plants bloom in summer, but at no fixed time, as the flowers can be produced at all seasons by cultivation more or less forced. The period of bloom lasts longer if after the flowers are fully open the plants be transferred from the hothouse to a more temperate atmosphere.

OUT OF DOORS.

The hardy species are grown like *Amaryllis vittata*, *i.e.*, care being taken to plant well apart and to cover the bulbs in winter with sand, Moss, or dry leaves. Increase by division of the bulb, taking care to preserve some of the root to each division, and when sufficiently strong place in pots in beds until they strike root. Some species give very few bulbs, and in this case recourse must be had to seed. These, which are large, must be sown separately in pots large enough to avoid disturbance of the roots in planting out. When the seedlings are strong enough they are again placed in pots at intervals of time and transferred to the temperate house for treatment as fully grown plants. The roots of *Crinums* ought never to be cut.

Horses, Asses, Zebras, Mules and Mule Breeding.\*

—The many books that have been written on the equine race have by no means exhausted the subject, and the existence of the present work is well justified by its contents. The outcome of the authors' labours has been to collect, in one handy volume of some 160 pages, results of the experiences of recent travellers respecting the history and habits of species hitherto imperfectly known and generally thought to be unamable—species like Prefevalski's horse and Grevy's mule, which have recently been impressed into the service of man, and from which new and valued hybrids have been obtained. But chiefly the authors have succeeded in supplementing the very scanty knowledge which has hitherto obtained in England in remarkable contrast to other civilised countries regarding the great value and economy of the mule as a beast of draught and burden for agricultural purposes as well as others. In this respect the authors may be congratulated on having produced a work of great practical interest and value. The book, which is well printed and illustrated with some excellent engravings, has an appendix containing a memorandum on "Mule Breeding in India."

The American Chrysanthemum Annual.†

—One of the American gardening papers, when reviewing the recently published Year-Book of the National Chrysanthemum Society, called attention to the necessity for some such publication in the States, where the Chrysanthemum claims almost as much attention as it does in this country. Mr. Barker's annual is an entirely new venture, and one that is executed in a very creditable manner and contains much that will interest American and English growers alike. Portraits of eminent authorities are given, the frontispiece being that of Mr. John Thorpe, the father of the Chrysanthemum in America. Some full-paged illustrations of new seedlings also embellish the work, the celebrated Japanese incurred Philadelphia being, of course, included. Many of the writers and the topics selected are, of course, American, but the editor has adopted a comprehensive programme and obtained reports from eminent growers and authorities in different parts of the world. Thus, we find England represented by Mr. C. E. Shea, Mr. Shoemith and Mr. Harman-Payne, Belgium by M. O. de Meulenaere

\* "Horses, Asses, Zebras, Mules and Mule Breeding." By W. Tegetmeier and C. L. Sutherland. Horace Cox, Field Office, Bream's Buildings, E.C.

† "The American Chrysanthemum Annual." By Michael Barker. Mayflower Publishing Company, Floral Park, New York.

(than whom perhaps no one is better qualified to speak), Australia by Mr. H. J. Carter, of Sydney, New Zealand by Mr. John Dutton, and Canada by Mr. Ewing. There are two illustrated articles on diseases of Chrysanthemums, besides historical and cultural papers. A list of new seedlings for 1895 is also given. The price is one dollar.

## TREES AND SHRUBS.

### THE WAX MYRTLE.

(MYRICA CALIFORNICA.)

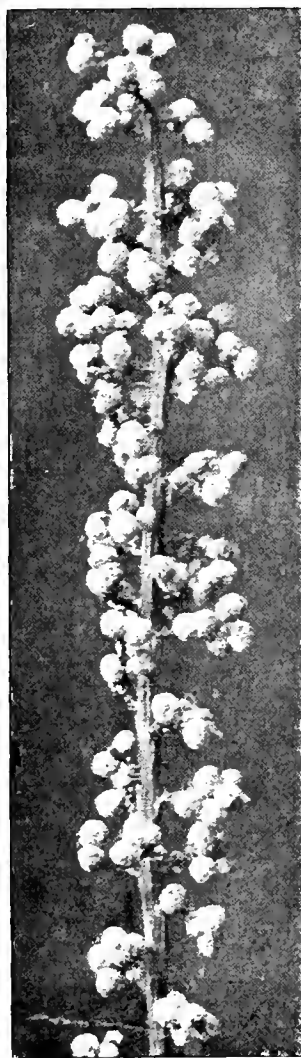
THE Wax Myrtles are desirable for the garden, for though not effective as flowering shrubs, they possess a most delightful spicy fragrance. Our native species, *M. Gale*, should find a place in every collection of sweet-smelling plants, and we find it free and vigorous in close wet soil where few things would succeed. It loses its leaves in winter. The Californian Wax Myrtle is evergreen, retaining its fragrant leaves throughout the winter. It makes a handsome bush in England, but is rarely seen outside of botanical collections. The illustration here given is of a fruiting branch, and Mr. Burbank says that in California this species is an upright growing tree, the trunk often attaining a diameter of from 1 foot to 2 feet.

***Sambucus racemosa plumosa aurea*.**—This promising variety of the scarlet berried Elder (*Sambucus racemosa*) received an award of merit at the R.H.S. meeting on May 14. The cut-leaved variety of *S. racemosa* has been grown for some years under the names of *serratifolia* and *plumosa*. The newer kind is a counterpart of this last, except that the foliage is of a pleasing yellow tint, and it is mere than probable that as the season advances it will (as with the golden-leaved variety of the common Elder) acquire a much deeper hue. In any case it bids fair to be a valuable addition to golden-leaved shrubs, as it appears to be equally vigorous with the typical kind. In rather poor soils fully exposed to the sun these Golden Elders are seen at their best, and, unlike some other golden-leaved shrubs, they are more effective after Midsummer than they are before that time. Of the common Elder there are several varieties remarkable for foliage distinctions, notably *variegata*, the leaves of which are marked with white; *heterophylla* and *laciniata*, two cut-leaved forms; and *rotundifolia*, with rounder leaflets than those of the ordinary kind.—T.

***Pterocarya caucasica*.**—Our large specimen of the above-named tree has for several years apparently grown so fast that I was induced the other day to hunt up the note and accompanying illustration published in THE GARDEN in 1888 with the view to ascertain what progress had actually been made. I find the spread of branches was therein given (and the measurement was an accurate one) as 75 yards; at the present time it is exactly 90 yards, a convincing proof, I think, that, given a favourable soil and situation, it grows, for an old tree, at a phenomenal rate. The extremities of the lower branches on all sides, being so far from the stem, have dropped close to the ground, helped thereto by the wealth of foliage and the long, heavy catkins, some of which this year are more than 20 inches in length and studded nearly throughout with the curious nail-like appendages. I think this is one of the most beautiful of all exotic trees; certainly one might travel many miles before finding anything to approach it in its grand symmetrical proportions, its fine foliage and unique fruit. The restrictive measures which on more than one occasion I have been compelled to adopt to keep the roots from encroaching on Vine and hardy fruit borders have seemed to give it new life, and I am inclined to think when next the trenches are opened we

shall find them a mass of fibrous roots. It is a pity the tree was planted on the site it occupies, but I imagine the planter had not the slightest idea it was likely to attain its present dimensions. If any GARDEN readers have seen the tree in its native habitat, the valleys of the Caucasian range, perhaps they will kindly give a little information respecting it.—E. BURRELL, *Claremont*.

***Rhododendron Smirnowi*.**—I was pleased to see that this distinct *Rhododendron* was flowering at Kew, and would like to ask if any reader of THE GARDEN has up to the present flowered *R. Ungerni*, which was introduced at the same time? Our plants were obtained from seed sent by the late Dr. Regel, so that they should be correct, but there is



The Wax Myrtle (*Myrica californica*). From a photograph sent by Mr. L. Burbank, Santa Rosa, California.

a very great resemblance between the two. The plants of *R. Smirnowi* are characterised by a more sturdy habit of growth, while the young leaves are covered on the undersides with a dense woolly tomentum of a dazzling whiteness, which changes to a browner tint on the adult foliage. In *R. Ungerni* the leaves are somewhat longer and the tomentum is a little less dense, while the plant does not branch so freely as *R. Smirnowi*. As figured in the *Gartenflora* some eight years ago or more, the flowers of *R. Smirnowi* are red, and those of *R. Ungerni* white. Not having induced our plants to flower yet, I cannot speak with certainty as to the correctness of their nomenclature, but feel confident that those grown as *R. Smirnowi* are quite correct. Concerning *R. Ungerni*

there is a doubt in my mind; hence, if any correspondent of THE GARDEN has flowered it, I should feel greatly obliged for the information.—H. P.

***Weigela Eva Rathke*.**—Among the first flowering *Weigelas* is the old *W. rosea* and its improved variety *Abel Carrière*; then afterwards we have a great many of the darker flowered forms. The flowers of these are as a rule not so widely expanded as those of *W. rosea*, but in some cases they possess the merit of flowering continuously for some time. One of the best of this group is *W. Eva Rathke*, whose blossoms are of a bright red tint and borne in great profusion. It forms a neat-growing bush, and is, like all of its class, perfectly hardy. So continuously does this flower, that when it was shown in such good condition as to be awarded a first-class certificate the summer had almost left us, for it was then the end of August, and *Clerodendron trichotomum*, always regarded as an autumn-flowering shrub, was at that time in full bloom. *W. Eva Rathke* is just now laden with blossoms, so that if a scattered succession is kept up till the end of August it will be a valuable shrub. Another long-flowering variety is *Gloire des Besquets*, which is of a paler hue than the preceding; and of white-flowered forms *W. candida* is the most persistent. All *Weigelas* have been remarkably fine this season. Where it is intended to propagate any of the *Weigelas* this is a very good time to increase them by cuttings, which should be formed of the young growing shoots (not the most vigorous ones) dibbled into pots, pans or boxes of sandy soil, and placed in a cold frame and kept close and shaded when necessary till rooted.—T.

***Azalea mollis*.**—There are a few things that everyone who is commencing to stock a garden with hardy flowers should lose no time in planting. Some of our best hardy flowers grow so rapidly that one may expect to see them at their best in the course of two or three seasons, but it is not so in the case of such things as *Paeonies*, *Hepaticas*, *Hellebores*, *Azaleas*, &c., which, being comparatively slow of growth, are some years before they yield the full measure of their beauty. Nothing can be finer than good-sized specimens of *Azalea mollis* when in full bloom, but unless one begins with fair-sized specimens, one must wait a decade or more to see them really effective. In Mr. G. F. Wilson's garden at Weybridge there are some plants which this year were wonderfully effective. They were planted about twenty years ago, and, soil and situation being congenial, they have formed handsome specimens some 8 feet high and of proportionate breadth. These hardy *Azaleas* are quite as beautiful and as effective as their relatives of the greenhouse, and so hardy and enduring, that the severest winter does not harm, and time heightens their beauty. They are gorgeous when massed, but I like them best when they are so far isolated that each plant can develop without contact with its neighbours.—J. C. B.

**Notes from Chester.**—The full wealth of summer glory now presses itself to the front, and the foliage damage for which the frost was responsible is now scarcely to be detected anywhere. The delicacy of the spring foliage is followed by such an abundance of floral beauty, that the season seems to be one of the richest through which we have passed for many years. We send you a few sprays from some of the more prominent flowering shrubs. *Viburnum plicatum*, with its masses of bloom, big petals, like the *Hydrangas*, and bold deep-coloured foliage to set off the showy inflorescence, is a charming plant in its place in the open, and just now, with the *Philadelphus*, commanding the attention of those who come within sight of it. We send a spray of *Philadelphus coronarius aureus* to bear out what we say. Delicately indeed is the beautiful *Spiraea Reevesiana*, with its *Deutzia*-like double flowers. There are many other free-blooming white-flowering shrubs beautiful just now, but to give some colour variation we have sent a spray of *Colutea arborescens*, an excellent shrub for town planting,



and *Robinia hispida rosea*, which is most distinct, its great flowered pink tresses hanging thickly and gracefully from its branches. *Weigela Stelzneri* is a charming feature in the shrubbery. Its flowers are bold in form and rich in colour. Roses and Irises fill wide breadths of garden ground with gorgeous colour, and here and there seas of flame mark the beds where the Poppies grow.—DICKSON, *Chester*.

## SOCIETIES AND EXHIBITIONS.

### ROYAL HORTICULTURAL SOCIETY.

JUNE, 11.

TAKING into consideration the fact that only three weeks have elapsed since the splendid display at the Temple Gardens, it is surprising that such a magnificent exhibition should have been brought together in the Drill Hall on Tuesday. Three tables stretched through the Hall, and on either side were two others, all crowded with a great diversity of exhibits. Another most pleasing fact was the large attendance. Such a gathering as that of last Tuesday clearly shows the necessity for more commodious premises, where not only the light is better, but also the surroundings. The success of these fortnightly gatherings have now exceeded the most sanguine expectations of their promoters.

Having regard to the late specially fine exhibition of Orchids at the Temple Gardens from both trade and private growers, it would not have seemed at all out of place had there been but a few on this occasion. This, however, was not so, for it was in many respects one of the finest, if not the very finest, displays of these flowers ever seen in the Drill Hall. Proportionately more certificates were awarded than at the Temple show, and some few most decided acquisitions were to be noted, prominent amongst these being the pure white form of *Cypripedium bellatulum*. Two other notable exhibits that received the higher award were *Cattleya superba alba* (of white forms of coloured species there appears to be no end) and *C. gigas Sanderæ*, of intensely deep colour. The medal awarded at this meeting to the best hybrid Orchid not yet in commerce was given to *Phaius Cooksoni*, a paler hybrid than *P. Owenianus* and scarcely so beautiful. Of specimen Orchids, particular note should be made of *Lælia purpurata Schrederæ*, of which a large specimen was staged in rude health; another of *Dendrobium thyridiflorum* was of unusually rich colouring, whilst of *Cattleyas* there were several good specimen plants. A small specimen was shown of *Cypripedium caudatum Wallisi*, every growth of which was flowering.

Hardy cut flowers were strongly represented, *Pæonies* being to the fore. Tea-scented *Roses* were of splendid quality. Two notable plants were those of *Blandfordia aurea*, of which a superb example was sent, also of *Carpenteria californica*. Several choice foliage plants were shown, including a grand specimen of *Dracæna Sanderiana*, exhibited by its introducers.

Fruits were chiefly represented by early Strawberries in fine examples, two very promising new Melons, both from one source, and by well coloured Lord Napier Nectarines. Vegetables comprised a large number of well-ripened Tomatoes, several fine dishes of Peas and Cauliflowers, with other early produce from under glass and the open air.

#### Orchid Committee.

First-class certificates were awarded to the following:—

*CIRRHOPELALUM ROBUSTUM*, an extra fine species, more robust than many and far more interesting in point of colour, which is a pale golden shade, with a soft suffusion of green, the labellum being of a dark maroon tint. The spike bore eight flowers; the bulbs are stout and fleshy. An introduction from New Guinea. From Messrs. James Veitch and Sons.

*CATTELEYA SUPERBA ALBA*, a white form of this richly-coloured species; the sepals and petals are milky white, with a perceptible trace of green on the reverse; the lip also is white, there being a slight touch of pale citron colour on its central part. From Mr. Thos. Statter.

*CYPRIPEDIUM BELLATULUM ALBUM* was beyond any question the most remarkable exhibit in the Hall. It is a pure white form, without spot or colour of any shade, being a truly white variety of the species, having the form of its best varieties, with great breadth of petal, whilst the lip is slightly elongated—quite a gem. From Sir F. Wigan's collection at Clare Lodge, East Sheen.

*CATTELEYA GIGAS SANDERÆ*.—A superbly coloured form of this fine species, more deeply shaded than any variety previously shown. The sepals and petals are of a deep rosy mauve, the latter a darker shade, being also notable by their breadth; the labellum, as in all forms of *C. gigas*, is a notable feature, the colour being greatly intensified, a rich vinous-purple tint, with the edge beautifully fringed, the blotches on either side of the throat being very conspicuous and the golden veining well defined. From Mr. Hamar Bass, Burton-on-Trent.

Awards of merit were adjudged to the following, viz.:—

*RENANTHERA IMSCHOOTIANA*, which, compared with the older, but still all too scarce *R. coccinea*, is of quite dwarf and compact growth. The plant in question bore but nine leaves, each some 4 inches long, the entire plant no more than 6 inches in height, yet it bore a handsome arching spike of fourteen flowers, sanguinous-red in colour, and of good size, with the peculiar form seen in this genus. The species in question is very rare, there being but two plants known to be under cultivation. From Mr. Ed. H. Woodall, St. Nicholas House, Scarborough.

*LÆLIA GRANDIS* (Wigan's var.).—A very distinct form of the type, with the flowers scarcely so large, but of handsome colouring, the sepals and petals being of old gold colour, the lip having reddish purple veins on a pale terra-cotta-pink ground. From Sir F. Wigan.

*LÆLIA PURPURATA RICHMOND GEM*.—A very fine form with flowers of extra size and vigour; the sepals and petals white, with but a very slight flush, the lip larger than usual and of an intensely deep purple, having the beautiful markings as seen in *L. purpurata Brysiana*. From Sir F. Wigan.

*CYPRIPEDIUM ELENOR* (*C. selligerum majus* × *C. superbians*).—Another specially fine hybrid with broad drooping petals, freely spotted, the dorsal sepal large and well marked, somewhat after *C. Lawrenceanum*. Two spikes bore two flowers on each, which were of massive proportions. From Sir Trevor Lawrence.

*CYPRIPEDIUM FRACIDA BRANDT*, an exceedingly fine and interesting hybrid, inasmuch as both of its parents are themselves hybrids, the one being *C. Io-grande* (*C. Argus* × *C. Lawrenceanum*), and the other *C. Youngianum* (*C. superbians* × *C. Roebelini*). The flowers are unusually large and of fine proportions; the petals retain the peculiar spotting characteristic of *C. Argus*, are 4 inches in length, of drooping form and of extra breadth, the ground colour a metallic pink. The dorsal sepal takes after *C. Lawrenceanum*, but is somewhat of a lighter shade, suffused with a bronzy purple hue, being angular in shape; the lip is of extra size and as prominent as in *C. Curtisii*. From Messrs. Sander and Co.

The special prize—offered on this occasion for the best seedling Orchid not exhibited previous to January 1, 1895—was adjudged to—

*PHAIUS COOKSONI* (*P. Humbloti* × *P. grandiflorum*), which has much of the habit and character of *P. Owenianus* (another fine hybrid), the flowers and growth being thus far of similar proportions. The sepals and petals are of a pale terra-cotta pink, self-coloured, the lip being broad, with the lower portion of a deep rose tint and the sides of a bronzy red. It was awarded a silver-gilt Flora medal. From Mr. Norman Cookson, Wylam-on-Tyne.

Botanical certificates were given notably to the five following species of *Masdevallia*, all belonging to the dwarf section of the genus: *M. campyloglossa*, *M. gemmata*, very minute; *M. Wagneri*, small yellow; *M. muscosa*, singularly pretty; and *M. demissa*. All from the collection of Mr. R. J. Measures. The same award was made to *Scuticaria Hadweni*, greenish yellow and brown, the lip pale rose, and *Oncidium insculptum*, a pretty, if not showy species, both shown by Mr. Walter C. Walker; and to *Sarcanthus Williamsoni*, growth very dwarf, the spike bearing small dark flowers, and *Bifrenaria vitellina*, both coming from Messrs. W. L. Lewis and Co.

Messrs. Sander and Co. showed a remarkably choice group, effectively arranged, with well-grown foliage plants. It comprised four large masses of *Odontoglossum vexillarium*, some with deep rosy pink shades, and others of lighter tints, but all fine varieties; one of the lighter kinds named *F. W. Moore* had flowers of fine proportions. *Lælia Lucasiana* was quite a miniature, with rosy purple flowers, the lip being a pale golden self, each blossom would not be more than 1½ inches in diameter. *Cattleya gigas* was shown of extra quality, notable both for the breadth of the lip and the deep colouring. *Phaius Owenianus*, a richly coloured hybrid, was present, also *Cypripedium Svend Brun* (*C. Lowi* × *C. Curtisii*), a noteworthy hybrid, retaining in the main the features of *C. Lowi*, but darker in colour. *Oncidium serratum*, a fine specimen, was shown full of bloom, its dark flowers being almost as large as *O. macranthum*. *Cattleya Mossiæ* was represented by one particularly fine variety, in which the rosy purple of the lip was almost supplanted by a rich shade of deep golden yellow, being most effective; *Thunia Veitchii magnifica*, with white, slightly flushed sepals and petals, and the lip somewhat darker, with old gold and pale purple markings, and a stout growth; *Thunia Beauonia grandiflora*, one of the parents of the latter, was also shown. Of *Angraecum Fournierianum* a good example was to be seen; the failing in this species appears to be that of casting its terminal flower buds. *Epidendrum vitellinum majus*, a mass in profuse flower, and a grand plant of *Lælia grandis tenebrosa* were both striking, the latter being rarely seen so good. *Dendrobium Johnsonæ* was shown in good condition; it is a singular looking, but handsome species with pure transparent white flowers, the sepals narrow and pointed, the petals broad and arrow-shaped, the lip marked towards the throat with dark purplish veins; the spikes are erect, being produced freely upon the old bulbs. *Cypripedium Numa* (hyb.) in the way of *C. Stonei*; *Sobralia Veitchii rosea*, a charming species, possibly the finest of all the genus, with a pale rosy purple lip of great breadth, the sepals and petals a light rose; *Odontoglossum lateo-purpureum*; *O. mulus splendens* and *O. hystrix* each had fine spikes in excellent condition; *O. crispum* in one instance was represented by a singularly distinct form, with the sepals blotched with pale oak colour, the petals being pure white (very fine); *Sobralia Kienastiana*, pure white with pale lemon colour in the throat; *Masdevallia Veitchii* and *Vanda teres* with *Aerides expansum* were all included in this exhibit; also *Anguloa eburnea*, *Dendrobium Phalanopsis Schrederianum*, *Cattleya dolosa*, and *Masdevallia Rozii*. A silver-gilt Flora medal was awarded.

Messrs. J. Veitch and Sons had a good exhibit, comprising several of their unique hybrids. Amongst these were beautiful examples of *Disa Veitchii* and *D. Langleyensis*, also *Lælia-Cattleya Canhamiana*, a hybrid between *Cattleya Mossiæ* and *Lælia purpurata*, and *L. C. Arnoldiana*. Note should also be made of the fine forms of *Lælia purpurata*, one extra good, a most vigorous plant; *Cypripedium Clonius*, a distinct and beautiful hybrid of the *Selenipedium* section; *Angraecum falcatum*, a good mass, with numbers of its small pure white flowers; *Cypripedium Stonei* with four flowers on the one spike; *Odontoglossum cordatum*, very good, with several spikes; *O. Pescatorei*, *O. vexillarium* and *O. crispum* in variety; *Cypripedium superbians*, extra fine;

*C. selligcrum majus* and *C. Lawrenceanum* Hyenanum, bearing one flower; and *Dendrobium Dearei*, with a large spike of bloom. Other noteworthy things were *Cattleya Mossia* and a beautiful form of *C. Mendeli*, (*Cattleya Warszewiczii* (*C. gigas*), a good plant, with *Cypripedium philippense*; *Oncidium macranthum*, a fine variety; *O. superbiens*, *Cypripedium Hookerianum* var. *volanteanum*, with cut blooms of *Cattleyas*, *Sobralias*, and *Vandas*. Award silver-gilt Flora medal.

Mr. Guiney Fowler, South Woodford, Essex, had a nice group containing a grand specimen of *Laelia purpurata* Schrodere with eight spikes, each bearing four large blooms; the purest of white sepals and petals, with the very faint rosy lilac veins on the otherwise white lip make this one of the choicest light forms of this species. *Dendrobium thyrsoiflorum* was another fine specimen plant with nine large spikes of bloom, each bearing flowers of extra size, there being more colour than usual in the lip. *D. Falconeri*, rarely seen, was represented by a small, but profusely-flowered and healthy example. Another form of *Laelia purpurata* was shown, with a distinct white splash upon the lip. *Odontoglossum crispum* was extra good, so also were *Laelia grandis tenebrosa* and *Cattleya Mendeli*. *Thunia Bensonae* was staged well, likewise *Cattleya Warneri*, richly coloured. *Phaius Owenianus* was here represented by a superb spike of intensely deep colour in the blossoms. *Cypripedium Lawrenceanum*, *C. caudatum*, and *C. Lowi* were comprised, also two good healthy plants of *Aerides Fieldingi*, each bearing a branching spike; this group was well arranged with light Grasses, and a silver Flora medal was awarded.

Messrs. Hugh Low and Co. staged a good group in their characteristic style, *Cattleya Mossia* being represented by several plants of the finest forms. *Dendrobium superbiens* (*maeranthum*), of rich colouring, and *Odontoglossum Roezli* in varieties were both seen to good advantage; so also were *Cypripedium Curtisii* and *C. Curtisii viride*, a pale form, suffused with light green. *Oncidium carthaginense*, an uncommon species, and *Odontoglossum vexillarium* were shown with a beautiful hybrid in *Laelia-Cattleya Ingrami*, very dwarf in growth, but bearing two large flowers, with the lip of a deep velvety purple and the sepals and petals light rosy purple (silver Flora medal).

Messrs. B. S. Williams and Son sent a bright group, in which *Dendrobium suavisimum* was extra good; *Cypripediums* were fine in masses full of flower, and *Epidendrum vitellinum majus* was in good form; *Pseudea* were represented by *P. Lehmanni*, *P. Roezli* and *P. Roezli rosea*, the latter quite distinct; *Cattleya Aclandiae* was here to be seen, also *Stanhopea Amesiana*, the beautiful creamy white species; *Aerides Houlettianum* and *Laelia grandis tenebrosa*. A silver Banksian medal was awarded.

Mr. Pitt, Stamford Hill, again staged an excellent group, in which were well-coloured forms of *Laelia grandis tenebrosa*, some with the sepals and petals of a dark coppery shade, and others of a lighter tint; *Thunia Bensonae*, very good; also *Anguloa Clowesi*, *Epidendrum vitellinum majus*, and *Huntleya albido-fulva*, an uncommon species. *Cypripedium hirsutissimum* was well coloured. Of *Masdevallia Schlimigii* there was a good example; also several good *Odontoglossums*, *O. Halli leucoglossum* and *O. maculatum* being two of the best. Award silver Banksian medal.

Messrs. Charlesworth and Co., Bradford, showed *Cattleya Mossia versicolor*, with the colouring of the lip, as seen in the best dark forms, running into the sepals and petals, distinct, but scarcely desirable. *Laelia grandis tenebrosa* was here represented by several plants in its best forms, each being well flowered; and *Oncidium macranthum* was shown in fine condition. A silver Banksian medal was awarded.

Mr. De Barri Crawshaw showed *Odontoglossums*, chiefly forms of *O. crispum*, each plant a picture of health. Note should be made of *Princess May*, with large blooms and beautifully fringed petals; *Pride of Rosefield*, an extra large

form, the spike bearing seven fine flowers. *O. citrosium* was here to be seen in a beautiful variety, viz., the *Rosefield*, having creamy yellow sepals and petals and a pale lilac lip, very distinct and choice in colour. *Laelia purpurata* *Crawshayana*, with the lip of a very dark purple and the sepals and petals of a rosy purple shade, was prominent; so was *Cattleya Mendeli*. Good forms of *Laelia purpurata* were shown, and in *Cattleya Mossia* Mrs. De Barri Crawshaw was to be seen a distinct variety. A most remarkable exhibit here was a grand form of *Oncidium Marshallianum* called *Crawshaw's Giant*, which well describes this plant, the spike bearing ten immense blooms, the colouring also being very deep; the name, however, is scarcely a desirable one. *Vanda suavis* and *V. tricolor* were included as cut spikes, each being excellent. Award silver Banksian medal.

Mr. Hamar Bass staged four fine plants of *Cattleya gigas* *Sanderi*, and to these a silver Banksian medal was also awarded.

Messrs. W. L. Lewis and Co. sent the following: *Bifrenaria vitellina*, *Cattleya Mendeli*, *Odontoglossum crispum* and *O. citrosium*, with *Cattleya Aclandiae*, *C. gigas*, and *C. Mossia*, as well as *Cypripedium Lawrenceanum* and *Odontoglossum vexillarium*. Award silver Banksian medal.

Mr. Chapman, gardener to Mr. R. J. Measures, sent an excellent exhibit of dried Orchid blooms mounted on paper, with the colours retained in a remarkable degree; so well were these specimens executed, that a silver Flora medal was awarded, and that most deservedly so. A few lines on the process adopted by Mr. Chapman would be welcome.

#### Floral Committee.

First-class certificates were granted to the following:—

**BENTINCKIA NICORARICA.**—A new Palm with a bold handsome leaf of large size and breadth, divided irregularly into several segments of varying width. It is quite distinct from any Palm at present grown. Shown by Messrs. F. Sander and Son, St. Albans.

**CYRTANTHUS OBLIQUUS.**—A robust and striking species, having a tall erect scape terminated by an umbel of drooping flowers which are a light brown or buff-yellow, shading to clear yellow, margined with light green. This also came from Messrs. Sander.

**BLANDEFORDIA AUREA.**—A very fine specimen of this was shown. The plant has long graceful grassy leaves, and it had more than a dozen flower-scapes which were 3 feet or more in height, each carrying a fine umbel of many drooping flowers. These are copper-yellow, shading to clear lemon-yellow at the tips of the segments. From Mr. Bain, gardener to Sir Trevor Lawrence, Burford Lodge.

Awards of merit were made to the following:—

**CARNATION CORUNNA.**—This is a yellow self of fine form, with a long pod that will not burst, the flower rich in colour. It is one of Mr. Martin Smith's raising, and was shown by Mr. Douglas, of Great Bookham.

**CALOCHORTUS LYONI.**—A notable addition to this graceful family. It has large flowers of a pale lilac colour when opening, but shading to almost white, with dark velvet brown blotches at the base. From Messrs. R. Wallace and Co., Colchester.

**IRIS ASIATICA.**—A magnificent bearded Iris with noble flowers as large again as those of *I. germanica*, borne high on stout stems, the standards rich blue, the falls of a violet-blue shade. This also came from Messrs. Wallace.

**BEGONIA B. R. DAVIS.**—A double-flowered kind of a deep self crimson colour. Shown by Mr. B. R. Davis, Yeovil.

**BEGONIA MONT BLANC.**—This is also double, and, as the name suggests, pure white. From Mr. B. R. Davis.

**BEGONIA LUCERNE.**—A distinct sort of novel and attractive colour, the outer petals soft apricot-yellow, shading to salmon on their edges, the

centre of the flower salmon-pink. From Mr. B. R. Davis.

**DELPHINIUM BEAUTY OF LANGPORT.**—This variety is a distinct break in a family where blue is quite the predominant hue. Its flowers are creamy white, the petals prettily tipped with pale sulphur-yellow. Shown by Messrs. Kelway and Son, Langport.

**PEONY LADY BERENFORD.**—A large-flowered variety of a soft blush-pink shade, delicate and beautiful. From Messrs. Kelway.

**PEONY DUKE OF EDINBURGH.**—The flowers of this kind are very double and of a deep rose colour. Also from Messrs. Kelway.

**PEONY SOLFATERRE.**—An elegant variety of soft colour, medium size and pretty shape, with outer guard petals which are white, the centre cushion of petals a pale cream colour. From Messrs. Barr and Son.

**STREPTOCARPUS DISTINCTION.**—This variety has fine flowers of a clear blue colour, feathered with violet-blue on the lower segments, and is a handsome kind. Shown by Messrs. J. Laing and Sons, Forest Hill.

**ROSE LAWRENCE ALLEN.**—A Hybrid Perpetual kind, having large, full flowers of a clear, soft pink shade, borne on strong, erect stems. Shown by Messrs. G. Cooling and Son, Bath.

**ROSE BLANCHE DE COUBERT.**—A variety of *R. rugosa* having double flowers, which are a little whiter than those of *Mme. G. Brouant*. From Messrs. G. Paul and Son, Cheshunt.

**INULA HOOKERI.**—A striking orange-flowered composite grown in all good collections of hardy flowers and too well known to need description. Also from Messrs. Paul and Son.

Mr. T. S. Ware, of Tottenham, received a silver gilt Banksian medal for a grand group of hardy flowers, in which Oriental Poppies, Irises, Lilies, *Canna Queen Charlotte* and *Brodiaea congesta*, with tall, robust scapes remarkably well grown, were prominent. Choice *Campanulas* in spreading, free-flowered masses, *Ramondia pyrenaica*, *Gypsophila prostrata* and *Carnations* were also noteworthy. Messrs. Kelway, of Langport, made a great display with *Peonies* in many fine double and single kinds, with *Delphiniums* and *Pyrethrums*. A silver Flora medal was awarded and a similar award was made to Messrs. Barr, who also showed hardy flowers in variety, *Peonies* predominating, the varieties very numerous, lovely and varied in colour. Irises, Day Lilies, *Anthericum* and *Dic-tamnus* were all fine in this group. Messrs. J. Veitch and Sons also made a great display with *Peonies*, and two noble spikes of *Eremurus robustus* in this group attracted much notice from visitors. *Streptocarpus* in variety were also shown, a silver Flora medal being awarded.

A very interesting group was that from Messrs. R. Wallace and Co., Colchester, containing some of the choicest gems among flowers of the season. In addition to *Calochortus Lyoni* (previously noted), *C. albus*, with about a dozen pure white flowers gracefully disposed on a strong stem; *C. pulchellus*, of a similar character, but rich yellow; and *C. amoenus*, deep rich pink, were charming, and are bound to grow in popularity, judging from the notice they attracted. Lilies were well represented, a fine form of *L. elegans* named *ornatus* being valuable for its earliness, the flowers orange red with black spots. Another handsome variety is incomparable, with flowers of a deep dark blood-red, shading to orange. *L. japonicum* *Colchesteri* was good, with pale sulphur-yellow flowers. Irises in many kinds were fine, especially *I. asiatica*, which received an award of merit. Some of the finest of the German varieties in cultivation figured prominently in this group, and we have never seen finer flowers of *I. Lorteti* than those shown here, of noble proportions and exquisite colour. Undoubtedly one of the most beautiful, it seems also one of the easiest to grow among the Cushion Irises. *Brodiaeas* were charming, also the best of them—*B. congesta*, *B. laxa* and *B. capitata* in blue and white. A silver Banksian medal was awarded. Mr. Prichard, of Christchurch, showed a charming group of hardy flowers, containing several fine things not shown

in other groups, as *Scabiosa caucasica*, the type and its pure white variety; *Tropeolum Leichtlini*, noted elsewhere; *Linaria dalmatica*, with long spikes of yellow flowers; *Salvia Hians*, a hardy kind, of a deep violet colour; *Orobanchis lathyroides*, having dense racemes of deep blue flowers; *Lathyrus rotundifolius*, an old, but lovely perennial pea; *Coronilla iberica*, rich yellow; *Betonica grandiflora*, handsome and well-grown spikes; and *Gillenia trifoliata*. A Banksian medal was awarded. Messrs. J. Laing and Sons staged a fine group of hardy flowers, in which Irises, Pæonies, and Pyrethrums were prominent; the improved kinds of *Streptocarpus* were also noticeable. A silver Banksian medal was awarded, and a similar award was given to Messrs. Cannell and Sons for a fine group of Cannas and Gloxinias in great variety. A charming group of old-fashioned, but still lovely garden Roses was shown by Messrs. Cooling, of Bath. *Rosa lutea* in single yellow and copper colour, *R. polyantha* and its large-flowered variety *R. rubrifolia*, with tinted leaves; *Lady Penzance*, one of the prettiest of the hybrid Sweet Briers; and many other sweet Roses that are in danger of being forgotten made a welcome reappearance in this group, to which a silver Banksian medal was awarded. Messrs. Paul and Son, of Cheshunt, received a similar award for a group of hardy flowers, in which dwarf Campanulas were pretty; alpine Pinks, attractive in variety; and single Roses, a prominent feature. *R. rugosa* in several forms was well shown, also *R. macropphylla*, with large single flowers of a deep pink. Mr. Mount, of Canterbury, showed cut Roses well, a box of Captain Hayward being conspicuous, whilst Gustave Piganeau, Princess of Wales, The Bride, and Edith Gifford were finely represented. A silver Banksian medal was awarded. Mr. Prince, of Oxford, had a similar award for cut Roses, a good lot of the variety Clara Watson being shown. Mr. Frank Cant, of Colchester, had a small exhibit of pretty garden Roses, and Messrs. W. Paul and Son showed their new Tea Rose Sylph in quantity. It is prettiest in the bud state. A new Tea Rose named Zephyr from the same firm looks promising for cutting, judging from the free-flowered clusters shown. It is of pale cream-yellow colour. Messrs. Veitch showed several hardy shrubs in flower, notably *Casalpinia japonica*, with long racemes of yellow flowers; *Hedysarum multijugum*, which has slender racemes of small pea shaped, magenta-red flowers. *Hypericum Moseianum* tricolor, attractive in variegation as well as in flower, and *Cornus brachypoda variegata*, *Lilium Ukeyuri* was prominent also. Some of the stronger stems carrying two fine flowers.

Mr. Louis de Smet, Leideberg, Ghent, showed a pretty silvery variegated *Abutilon* which is likely to become a popular foliage plant, being so distinct from any other kind, the variegation in the form of a broad white zone with the centre of the leaf grey-green. Small plants only were shown, and the committee wished to see it again. Mr. J. T. Bennett-Poë received a silver Banksian medal for a splendid specimen of *Carpenteria californica* growing in a tub. It was the picture of health, quite 7 feet high and had clusters of fine flowers all over. It attracted much notice. *Tropeolum Coolgardie*, which received an award of merit a short time back, was again shown by Mr. H. B. May in neat pyramidal plants profusely flowered. Mr. J. Douglas showed two good yellow Carnations in addition to the one previously noted, and Mr. T. Bones, of Heaton Garden, Cheshunt, showed a group of plants of a free-flowering sweet scented yellow self. Mr. C. Turner showed a pink flowered variety in the way of Miss Jolliffe named Mrs Greenfell, and Mr. Bliok, gardener to Mr. Martin Smith, staged a little group of a Malmaison variety called Lady Grimston, most distinct in colour, flaked with red on a lighter ground, but practically a self in effect. Mr. Campbell sent from The Willows, Windsor, a very formal trained specimen of *Bougainvillea glabra* named Campbelli, only a shade deeper in colour than the type. Cut trusses of seedling *Rhododendrons* fine in colour and of robust

character were shown by Mr. Anthony Waterer, also profuse sprays of the dark-flowered *Weigela Eva Rathke*.

#### Fruit Committee.

The exhibits before this committee were more numerous than usual, good Tomatoes and green vegetables being staged in quantity. The Strawberries of Messrs. Laxton were very fine and much admired.

Awards of merit were granted to the following:—

**MELON THE LADY.**—A small fruit, nicely netted with white flesh, the centre tinted with scarlet. A fruit of great promise, being rich, juicy and very solid. It is stated to set freely and crop well, and is just the fruit for a private garden. The committee requested it to be sent again when more ripe. From Mr. C. Thomas, the Royal Gardens, Frogmore.

**CARTER'S SPINACH.**—This was sent to Chiswick for trial by Messrs. Carter, of High Holborn, as the Carter Spinach, but the committee considered it to be the same as Carter's Long Standing and the award was made under this name. It was shown from the society's garden at Chiswick. It is a distinct type of Spinach with large thick green fle-ly leaves remaining good a long time, not running like ordinary forms. It will be a useful Spinach for light soils and summer use, and is quite hardy, having stood the winter well.

**TOMATO EXCELSIOR.**—A variety tried at Chiswick last season, receiving the award of three marks. The fruits shown were not first rate, and the committee wished to see better fruits before giving the higher award. It is to be regretted distinct names are not given, as this kind is very similar to the well-known Hathaway's Excelsior, having globular fruit smooth, in outline, solid and of good flavour. From Mr. J. Corlett, Mulgrave Castle Gardens, Whitby, Yorks.

Mr. Mortimer, of Farnham, staged a grand lot of Tomatoes of perfect colour and finish, also some twenty fruits of his new Cucumber Progress a very good looking fruit with little neck and a tremendous cropper; this variety was requested to be sent to Chiswick for trial next season, when the society intend trying Cucumbers. The most notable dishes of Tomatoes were Sutton's Perfection, Maincrop, Best of All and Al. Frogmore Seedling, a new fruit of last season, maintained its excellent form. Conqueror was very good, but more ribbed than usual. In all twenty four dishes were shown and a silver Knightian medal awarded.

Messrs. Laxton Bros., Bedford, staged a very fine lot of Strawberries in six varieties. Among them was a new fruit, a mid-season variety, very large, with firm flesh, deep red colour, and prominent seeds. It was named Monarch, and was awarded a first-class certificate, this to be withheld till the committee have tested the cropping qualities in the usual way. They requested Messrs. Laxton to send fruits to the next meeting. The other varieties comprised the recently certificated Leader, which was very fine and good in flavour, Sensation, a large variety, Royal Sovereign, remarkably fine, John Ruskin, and Noble. A bronze Knightian medal awarded.

Mr. Hindson, Gunnersbury House Gardens, Acton, received a cultural commendation for a very fine box of Lord Napier Nectarines, the fruits large and of very fine colour.

Mr. G. Wythes, Syon House Gardens, Brentford, staged a small collection of Peas, Beans, Turnips and Cauliflowers, open-air produce from plants raised under glass and planted out. Duke of Albany, Stratagem, Duke of York, Laxton's Gradus, and Veitch's Chelsea Gem Peas were very good. Dwarf Erfart and Walcheren Cauliflower, autumn-sown Syon House, Selected Mohawk French Beans, Veitch's Early Longpod Bean, very good, White Milan and Carter's Cardinal Turnip, Egyptian Beetroot and Potatoes were all first-rate. A bronze Knightian medal was awarded, and a similar award went to Mr. Pentney, Worton Hall Gardens, Isleworth, who staged a large collection of vegetables, having two lots of Tomatoes, Veitch's Selected Marrow, Ellam's Cabbage, Early

London Cauliflower, Giant King and Veitch's Ash-leaf Potatoes, very good, Hick's Cos Lettuce, Early Milan Turnip, Veitch's Selected and Chelsea Gem Peas, and other dishes.

Mr. Ward, Longford Castle Gardens, staged three nice boxes of Peas from plants raised in heat, receiving a cultural award, the varieties being Carter's Telegraph, very good, William 1st and Carter's Lightning. Mr. Crook, Forde Abbey Gardens, Chard, Somerset, sent a nice lot of Veitch's Chelsea Gem Peas, both on the haulm and gathered. A new Kale was sent by Messrs. Malden, Cardington, Beds, but it is out of season at this date. Mr. H. Staples, Belmont, Salisbury, sent some huge heads of Asparagus named Hative. Mr. G. Wythes sent Carter's Cardinal Turnip, a new variety, of a pink colour, solid and good; also the new White Milan Turnip, a pure white variety, and Veitch's Improved Early Longpod Broad Bean, the earliest variety of the longpods and very hardy. All these vegetables the committee requested to be sent to Chiswick for trial.

From the society's gardens was sent two varieties of Spinach, the one certificated above, and the Flanders; also some very fine fruits of Laxton's Royal Sovereign Strawberry. There were also shown green-fleshed Melons by Mr. Thomas, Frogmore; a large scarlet fleshed Melon from Mr. Spencer, Goodrich Court Gardens, Ross, Hereford; the new May Queen Strawberry, by Mr. Collis, Bollo Lane, Chiswick, and a few small exhibits of Potatoes.

Mr. Frank Cant gave a practical and most instructive lecture on "Rose Growing under Glass." Although Roses might be grown in almost any glass structure, according to his experience, that most suitable was a span roofed house running from north to south. A house 24 feet in length and 14 feet in width could have a centre bed 7 feet wide, a path 1½ feet wide, and then another border all round the house. It has often been said the Teas and H.P.'s could not be grown successfully in the same house, but he found they could in the form of arrangement he was suggesting if the Teas were confined to the centre bed and the H.P.'s to the outer bed. The Teas liked more sun, and by this arrangement shade when necessary could be given to the H.P.'s. Structural details of the house were enlarged upon, and removable lights suggested for structures in which the Roses were planted out. As regarding culture in pots, he remarked upon the importance of the plants having a season of preparation. It was impossible to pot up Roses in the autumn and flower them successfully the following spring; they must have a season of growth in pots first. The soil he found the best was good fibrous loam, cut and stacked with cow manure sandwiched between, allowing it to stand about six months. Judicious watering and ventilation were the secrets of success, and mildew, the worst of Rose pests under glass, was generally attributable to errors in this respect. The remedies advised for a bad attack are familiar, being treatment with sulphur. Green-fly, another pest to be reckoned with, could be kept in check by the syringe, but if it gained the upper hand at any time, fumigation must be resorted to, McDougall's sheets being the best possible thing for the purpose. As regards stimulants, they should never be applied till plants were established and in need of them. He preferred liquid manure from a cow yard; that from the stable was dangerous and needed careful dilution. Failing cow manure, there was nothing better than soot water obtained by steeping a bag of soot in the usual way.

**United Horticultural Benefit and Provident Society.**—The usual monthly meeting was held at the Caledonian Hotel on Monday evening last. Mr. Nathan Cole presided. Four new members were elected. It has been decided by the committee that the increase of sick pay from 10s. 6d. to 12s. and from 16s. to 18s. per week in the two classes respectively shall commence from

the half-year—July 8. The treasurer reported that he had invested £200 in West Bromwich 3 per cent. stock.

**Floral fete at Royal Botanic Society.**—Fortunately, fine weather favoured this now annual children's floral parade in the Regent's Park Gardens. There was a large attendance and a display of many tastefully decorated vehicles of all kinds, in some cases, however, the contrast of colour being none too happy. There were many exhibits in the large tent, as our list of awards will show.

**The People's Palace Horticultural Society.**—The summer exhibition of this society, originally announced for July 11 and two following days, will now be held on July 4, 5 and 6, in order to suit the convenience of their Royal Highnesses the Duke and Duchess of York, who will visit the show and be accompanied by the Duke of Fife, the president of the society; and in order that as many members of the society as possible may be in attendance, the visit will take place at 5 o'clock in the afternoon. On Saturday, the 8th inst., Mr. H. J. Jones, Ryceroft Nurseries, Lewisham, gave an address before the members of the society at the People's Palace, his subject being "A Chat about Chrysanthemums."

## NOTES OF THE WEEK.

**Pæonia Whitleyi.**—Mr. W. Macartney sends us from Clogher Park, Tyrone, fine flowers of this charming single Pæony and Oriental Poppies in bright and varied colours.

**Salvia Hians.**—This is the handsomest of the hardy Salvias, and a pretty species, but rarely seen now. A good bunch of it attracted some notice in Mr. Prichard's group of hardy flowers at the Drill Hall on Tuesday. Its flowers are large and showy, of a deep violet-blue colour.

**Aquilegia.**—I am sending a few flowers of some seedling Aquilegias raised here. The seed parent was Aquilegia glandulosa and they are all of that type, as you will see by the long spurs.—J. HUGGINS.

\* \* A pretty lot in varied colours, but these hybrids are now often raised in gardens.—Ed.

**Linaria dalmatica** was well shown by Mr. Prichard on Tuesday, the spikes of great length and crowded with large clear yellow, sweet-scented flowers. In the ground this plant is apt to become a nuisance, as it runs so freely. The best place for it is on the top of an old wall, and some of the fine spikes shown were cut from plants growing on a wall. It is one of the handsomest of the perennial kinds.

**Oncidium sphacelatum.**—The value of this Orchid for decoration was fully seen in a group of miscellaneous plants arranged for effect at the Whitsuntide exhibition at Southampton. Mr. W. Peel, gardener to Miss Todd, Sidford Lodge, Shirley, employed it largely and with good effect, associated with Palms, Ferns, a few Cattleyas, and other flowering plants. Many of the flower panicles were 5 feet long, arching beautifully.—E. M.

**Tropæolum Leichtlini.**—This, one of Herr Max Leichtlin's recent introductions, was admirably shown by Mr. M. Prichard at the Drill Hall on Tuesday. It is clearly related to *T. polyphyllum* and has a strong resemblance to that species at a casual glance, but the differences observable by close inspection are in its long, narrower leaflets; whilst the flowers are distinctly deeper in colour, being of quite an orange-yellow hue. The sprays shown were long and abundantly flowered.

**Brassia verrucosa.**—I enclose herewith a portion of a spike of *Brassia verrucosa* which, I am told by a good authority, is better bloomed than usual. The spike was one of six, of which this and another had each fourteen flowers, and the others twelve each. Thus grown it is, although old-fashioned and not showy, a very grace-

ful object. It is not *B. v. major*—at least I have another plant much larger in all its parts, but very shy about flowering. Kindly let me have your opinion on the enclosed.—G. P.M.

\* \* A very well-grown plant.—Ed.

**Eremurus robustus.**—With reference to M. Van Houtte's remarks on his *Eremurus robustus* and yours as to its being more robust than we have them in England, let me say that my plant (illustrated in THE GARDEN last year) has three spikes, measuring from base to tip of inflorescence 9 feet 3 inches, 8 feet 1 inch, and 7 feet 6 inches, the flowering portion of the tallest measuring 3 feet 8 inches. I am glad to say I have a nice lot of seedlings from last year's seed. We are dreadfully burnt up here, only 5 51 inches of rain since the beginning of the year.—F. PAGE-ROBERTS.

**Calochortus Lyoni.**—Without a doubt, as these become better known and their culture understood—which, by the way, is simple enough—they will have many admirers and be largely grown in gardens suited to them. The flowers, unique in form and lovely colour, have a grace and elegance peculiarly distinctive, and the family is growing in numbers and importance. The variety here named, and for which Messrs. R. Wallace and Co., of Colchester, received an award of merit on Tuesday, is a most noteworthy addition. It belongs to the Mariposa section and has fine, large flowers borne on tall, strong stems, in colour pale lilac, shading to almost white, with a rich velvet-brown blotch at the base of each petal.

**Iris asiatica.**—This noble Iris was shown in magnificent form by Messrs. R. Wallace and Co., of Colchester, at the Drill Hall on Tuesday, and it was deservedly given an award of merit. It is a native of Asia Minor and is clearly allied to *I. germanica*, but stands out conspicuous from all the *I. germanica* varieties by reason of its fine size and noble beauty. The flowers are immense, but admirably proportioned and borne on stems more than 3 feet in height. The standards are clear blue, the falls of unusual length, purplish blue around their edges, shading to a violet-blue in the centre. A good engraving that shows well the character of the flower was given in THE GARDEN of February 6, 1892, p. 121.

**Tufted Pansies.**—Mr. Forbes, of Hawick, sends us a charming selection of tufted Pansies, including many varieties of the Violetta type. We regret further needless classification of these as miniatures, which will bother many people. Except in one or two cases there is no difference in size, such kinds as George Muirhead, Sylvia and many more being as large as the best older Pansies. It is nice to see the great purity of colour of these delicate self-coloured kinds recognised even in nurseries where the florists' kinds had first place always. Among those we greatly admire are Gnome, yellow; Mrs. Primrose and George Muirhead, yellow with fine flowers; Jennie Turnbull, delicate blue; Picotee, blue, edged white; Blush Queen and Sweet Lavender.

**Magnolia Wataoni.**—A fine flower of this new species was shown by Mr. Hudson, of Gunnersbury, at the Drill Hall on Tuesday cut from a plant that has passed the winter in the open air quite unprotected. Its hardiness may therefore be taken as proved, and the tree planted with confidence as regards its future welfare. The flower is of the same character as that of *M. parviflora*, but larger. The flowers are ivory white in colour with a cushion of red filaments in the centre, large, showy and enduring. Apparently they come a little later than the flowers of *M. conspicua* and its varieties, which is fortunate, not only in prolonging the season of these noble flowering trees, but the beauty of their display is less likely to be marred by inclement weather. Although as yet we know little of these newer kinds, they promise well, and it is to be hoped that many will plant them.

**The weather in West Herts.**—On three days during the past week the temperature in the

shade was very high for so early in June, reaching respectively 73°, 78° and 80°. These were, however, the only readings which have been in any way exceptional as yet this month. At the present time the temperature of the ground at 2 feet deep stands at 62°, and at 1 foot deep at 63°. The latter reading is about 2° in excess of the average for June, and 8° higher than at the same period last year. About a tenth of an inch of rain fell on the night of the 11th, but the surface of the soil appeared as dry as ever at mid-day on the 12th. During the last six weeks only about half an inch of rain has fallen, and no rain water whatever has come through the light soil percolation gauge for a month, and none through the heavy soil gauge for more than a fortnight. On the 7th the sun was shining brightly for very nearly fourteen hours. I cut my first Hybrid Perpetual Rose from the open ground on the 9th inst., or ten days earlier than the average date for the previous nine years, and a fortnight earlier than last year.—E. M., *Berlhamsted*.

**A warning.**—Mr. J. B. Crace, of 38, Wigmore Street, writes under date June 5: "Allow me to warn your readers and advertisers against a cunning swindler. Wishing to obtain a good place for a former gardener of good character, I advertised on his behalf. Among inquiries in reply I had a personal call from a man who professed to be tenant-bailiff of a gentleman near Northampton, at whose request, so he said, he called to make personal inquiry about my gardener. This bailiff was a grazer on his own account and came to town once every week to attend the early cattle market. Now my gardener had temporary work some thirty miles from town, but the 'bailiff,' anxious to see the man for himself, decided that he would run down 'after the market was over' when next he came to town in a few days. He accordingly came again to me, ascertained that the gardener was not yet engaged, and his address, and departed, remarking that he thought he would be the very man. Well, my visitor carried out his promise next morning: took train into Surrey, found my gardener, and decided to engage him, but advised him to try the place for a week or two before moving his furniture. Just as he was going he remembered that his cash was short of what he would require to get back to Northampton, and borrowed £2 of the unlucky ex-gardener, who still awaits repayment."

## PUBLIC GARDENS.

**Lincoln's Inn Fields** are gradually being turned into a wilderness, and if the County Council intends to do nothing to check the destruction, the next best thing would be to asphalt the fields all over and chop down the trees. The children who swarm into this delightfully quiet, restful retreat ignore all appeals to keep off the Grass, so that it is now almost difficult to say where the paths end and the turf begins, so complete has the destruction become.

**Another public recreation ground.**—The owner of the land known as the Cross-bones Burial Ground has offered to sell it at a fair price if the land could be turned into a public recreation ground. The offer has been made to the St. Saviour's (Southwark) Board of Works, and a special committee has been appointed to consider the matter. The area of the land is 30,000 square feet, and the district in which it is situated much in want of an open space.

**Names of plants.**—*S. L.*—1, *Polemonium Richardsoni*; 2, *P. corulea*; 3, *P. corulea alba*.—*Mrs. S. Marshall.*—1, *Dianthus deltoides*; 2, *Rosa macrophylla*.—*H. Wate.*—*Oncidium flexuosum* and *Cattleya Mendeli*, a pale and pretty form.—*R. M. Laurie.*—White flower *Smilacina bifolia* and *Aceras anthropophora* (the Man Orchis).—*J. L. Mansell.*—*Hordeum jubatum*.—*C. B. B.*—1, *Allium Moly*; 2, *Delphinium nudicaule*.

"This is an Art  
Which does mend Nature: change it rather; but  
THE ART ITSELF IS NATURE."—*Shakespeare.*

## ROSE GARDEN.

ROSE W. A. RICHARDSON.

THE popularity of this Rose was insured from the time of its first appearance at the shows, now many years back, when Rose lovers were astonished and charmed with its richly-coloured flowers. Now it is much grown, and, still remaining without a rival in its unique colour, has also proved one of the very best Roses for walls, fences, arches, or any situation suited to a Rose of vigorous climbing growth, whilst it is second to none in profuse and continuous blooming. Some years back complaints were made of its erratic behaviour, and we have had some experience of the same ourselves. Of two plants growing several yards apart, apparently under exactly the same conditions, one refused to grow at all, but just lived, whilst the other covered the entire space allotted to the two plants, and now annually hides the wall and its own leaves in a marvellous profusion of flowers. The first display is always a great one, but it does not exhaust the energies of the plant, as after a short rest it commences flowering again and blooms throughout the autumn. The flowers are also disposed to vary in colour, the blooms of some plants having their outer petals almost white, and only the rich apricot tint in the centre. These are disappointing, but, happily, they can be avoided, also the inexplicable failure of plants to grow. W. A. Richardson grows and flowers as well upon its own roots as on any stock; therefore propagation by cuttings from plants that bear the brightest and best flowers will give plants free from any defects of this sort. Plant own-root plants in light rich soil and they will soon show that they have abundant natural vigour, which is not increased, but often diminished, and the plant's life shortened by condemning it to grow on any other roots but its own. This Rose is quite as important as the best Dijon Teas, and surpasses these last in colour effect and lavish profusion of flowers.

**Tea Roses and frost.**—At Reigate Mr. Haywood has been able to preserve his dwarf Tea Roses admirably by adopting the simple process of earthing them up in the winter. Netting, artificial litter, Fern, cocoa fibre refuse, or similar materials are not such effective frost protectors as soil, especially if it be of a light nature. The effect of the earthing here, which was about 6 inches in height, was to protect every dwarf Tea Rose so well, that of very large numbers not one is missing, and all are making good, though late growth. The finest shoots, however, are seen on a few plants left growing amongst some bush Apple trees. Hybrid Perpetuals are all comparatively uninjured, and in many cases are showing prominent buds. A good rain is much needed, however, for all Roses.—D.

**Rose Belle Siebrecht.**—In the class of so-called Hybrid Teas are some very good garden Roses. This, one of the latest additions to that class, is already highly praised in America, and Messrs. Siebrecht and Wadley, of the Rose Hill Nurseries, New Rochelle, U.S.A., send us a very good coloured plate of it. The form of La France, one of its parents, is manifest in the shape of the flowers, which are of a deep rich pink and said to be very lasting. Doubtless it will soon be ex-

tensively tried in this country in the open air. Dean Hole was favourably impressed with it, and the leading pot and market Rose growers of America say much in its favour.

**The slaughter of the Roses.**—Though some districts escaped almost unhurt, others have suffered very heavy losses through the abnormally severe frosts of last February. The verdict of some of our largest growers in East Anglia is, "the whole of my standard Teas are dead, and dwarf Perpetuals on Manettis and Briers were so severely mauled and wounded by the frost as to ruin the spring trade." The latest tidings are that full half the Briers for stocks are dead, and on inquiring about famous Maréchal Niels in the open, "dead or dying," have been my only answers up to date. Another feature of the zero frosts is revealing itself daily. Roses pruned back to what seemed their lowest frozen branches are dying back still further. This is one of the most depressing phases of severe frost-bites in Roses or other plants and fruit trees, especially Peaches, Nectarines, and Apricots. Frost injuries run deeper and spread much further than appears at first.—D. T. F.

### ROSE NOTES.

CONSIDERING the havoc wrought among our Roses during the winter and the large quantity of wood destroyed, there is by no means a bad outlook at present. Upon walls and fences there is quite a show of flowers, Gloire de Dijon and all of the early varieties being very full. Banksians are better than for years past wherever their wood escaped the frost. My cut-back Hybrid Perpetuals are quite gay, and the season promises to be a good and early one. Certainly the date of the Crystal Palace N.R.S. exhibition will be suitable this year both for southern and northern growers. At the time of writing a gentle shower is falling, the first rain for six weeks or so, and our soil is parched up. It will be a great help to standard and half-standard stocks, many of which may yet be saved if the rain continues. As it is, there are more blanks than would have been the case if a shower had fallen early last month. Dwarf stocks are also sadly in need of a good rain. We have commenced budding upon standard Briers; this is necessary wherever a shoulder is ready, as they so soon go past that stage in which the bark lifts easily and clean. It is a good plan to lay out the number of steeks you mean to work with each variety and then bud upon the shoulders as they become sufficiently advanced. This is far better than waiting to take the bud right through, for not only do we get the shoulders budded at the most suitable stage, but we often have to procure our buds of choice varieties in more than one cutting. Close hand-picking is necessary still among the maggot and also with weevils and Rose beetles. The latter are more common than for many years so early in the season, and will soon spoil a large number of promising Rose buds. The heading of maiden dwarfs must be attended to if we want bushy plants, particularly for pot work in the coming autumn. Climbers do not need heading, nor do the dwarfier growing Teas and Noisettes, but to allow A. K. Williams, Alfred Colomb, and others of similar habit to grow up one shoot only is a mistake except where an early maiden bloom is wanted. Still keep the hoe going among maidens and all plants that are not mulched with manure. Surface stirring conserves the moisture and also does much towards keeping the plants clean and healthy.

Under glass young Roses are looking well, and may now have more air given. I was recently written to respecting the merits of growing Roses with ample ventilation or keeping the house quite closed day and night. It is more a matter of heat than ventilation. A little reason in ventilation will avoid mildew, while I am sure that too close an atmosphere with sudden changes of temperature will bring it on equally as soon as draughts from bad ventilation. Neither extreme should be practised. Some few years back I wrote a note

about the existence of two Roses under the name Souvenir d'Elise. For some time I have been aware that Duc de Magenta was about under the wrong name, but I am not now referring to this variety. There is one that we have purchased as Souvenir d'Elise and also as Souvenir d'Elise Vardon, and which turns out to be Pauline Labonté. Last winter I purchased a batch of Teas from France to refill a few of the blanks in my beds. They were guaranteed true to name, but I find Pauline Labonté once more sent me as Souvenir d'Elise Vardon. The true Souvenir d'Elise Vardon and Pauline Labonté are very widely apart in every respect, scarcely any two Roses more so. All of the other varieties are true, and probably the vendor considers this one correct also. I have heard of Souvenir d'Elise growing to enormous dimensions in Devonshire, and, from the description, have not the least doubt that Pauline Labonté is its correct name. Hybrid Sweet Briers are looking well, and I note that they are inquired for very closely. Both Lord and Lady Penzance are beautiful indeed, but are by no means the best growers here. R.

### THE MARKET GARDEN.

#### FIELD CULTURE OF VEGETABLES.

(Continued from page 406.)

#### ONIONS.

THE field culture of Onions is a matter of the highest importance to cultivators, as almost every year there is a dearth in the supply of full-grown harvested Onions to the Paris market so that the deficiencies have to be made up by large importations from Italy, the countries of the lower Danube, and even from Russia. And yet the sowing of a crop of Onions in spring to be gathered in autumn is one of the simplest operations and can be done almost in the same manner and as readily as sowing a crop of Oats.

The soil should be very well prepared and finely pulverised on the surface. Deep tillage is not advisable, as Onions bulb much better on a hard bottom. The seed should be sown at the close of February or during the first fortnight in March. If sown in drills from a seed-distributor the work of thinning out and weeding will be greatly facilitated. In soil of ordinary quality, seed of medium-sized varieties of Onions should be sown in drills 10 inches apart and the seedlings should be left 4 inches apart in thinning out. This would give about forty bulbs to the square yard.

Thinning out should be done early, so that the bulbs may attain their full development. If the thinnings are about as thick as a goose-quill and belong to an early variety, they may be put in the shade under a shed or even left on the field and turned over from time to time. Most of these thinnings will ripen and form small bulbs about the size of a marble, which are useful for pickling. The crop when once thinned out requires no further attention, except an occasional hoeing, until the bulbs are fit for gathering, which takes place when the leaves and stalks have withered. The bulbs are then pulled up and left on the ground for two or three days to dry, after which they are stored in a loft, being either thinly spread out on the floor or hung up in long "ropes" formed by interlacing the dried stems. Long keeping varieties should be grown in preference, as these enable the grower to choose his own time for selling when prices are most remunerative. Early kinds of Onions do not keep long enough for this purpose, and they are only suitable for cultivation in localities where Onions can be profitably sold in the young or fresh state.

The Oignon blanc rond dur d'Hollande, the Jaune paille des Vertus, and the Oignon de Douvres are the most suitable kinds for field culture and are long-keeping varieties. The second of these, a large and flat-shaped Onion, is the most commonly grown of all the coloured kinds in the neighbourhood of Paris. The other two, a white and a coppery yellow variety, are more globular in shape.

L'Oignon dur de Russe, which is largely imported in seasons when Onions are scarce in our markets, possesses valuable keeping qualities. The bulb is only of medium size, shaped like a short Pear or a Shallot, and is frequently divided into two parts, but keeps so well that it sometimes continues in pretty good condition up to the second spring after the time it was gathered.

L'Oignon rouge foncé and l'Oignon rouge sphérique are also good kinds for field culture, and, along with the Oignon rosé de bonne garde, may be mentioned here on account of their colour, which in some markets may be a recommendation for them.

In the neighbourhood of Paris it is estimated that the cultivation of an acre of Onions will cost £16, and that the crop will bring in £48. Were the profit only half as much, the field culture of Onions would be worth trying, and in the calculation of profits the grower should always bear in mind that the weight of a crop of Onions diminishes considerably as the bulbs become drier in the interval between the time of gathering and that of sending to market.

#### DANDELION.

Almost from time immemorial the wild Dandelion plants of the fields have been gathered and sent to the Paris market daily in quantities amounting to many thousand pounds weight.

A few years since the farmers at Saint Denis, Pierrefitte and the surrounding districts began to grow Dandelion in their fields, and this practice should be widely adopted. The crop is one which demands but little expense and labour, while the return from it is sufficiently remunerative. The seed is sown in well-prepared ground in drills which are from 1 foot to 16 inches apart. By the end of summer the surface of the soil is covered with the foliage and the plants form strong tufts, which should be earthed up before the ground becomes hardened by frost. All of this work can be done with a plough. During winter and the early part of spring the Dandelion plants, blanched in this way, furnish the material for an excellent salad and are quite as good, in fact, for this purpose as curled Chicory plants. Dandelion is also an excellent vegetable when boiled and should be more generally used in this way.

Several improved varieties of Dandelion have been obtained in the course of cultivation. The best of these is the full-centred one which forms very thick and well-furnished rosettes, which when well grown may attain a weight of 2½ pounds each. The broad-leaved and the curled-leaved varieties are also highly deserving of recommendation.

#### PEAS.

To a still greater extent than Asparagus and Green Kidney Beans have Peas become one of the articles of commerce that are sent from great distances, part of the Paris winter supply coming all the way from Algiers; consequently, our home growers cannot depend so much as formerly on the profits of their early or forced crops of Peas. They have a better chance of remuneration from late crops; for, at Paris, garden produce which comes into market after the regular season is over is sometimes more highly appreciated than early produce which anticipates the regular season.

There is also a large demand for green Peas at the factories for preserved vegetables, and for the supply of these the Peas must be sown on a large scale and gathered daily in order to have them as uniform as possible in size and in the proper degree of ripeness.

The dwarf varieties are undoubtedly the best for field culture, but they are generally less productive than the tall-growing kinds, and the pods are not so readily gathered. Moderately tall-growing kinds are, therefore, preferred for field culture. These, however, are not staked, but the plants, clinging to one another with their tendrils as they grow up, form a compact mass about 3 feet high, which can withstand wind and rain very well. In order to hasten the production and shorten the period of gathering the crop, the practice, in the neighbourhood of Paris, is to cut off the top of the main stem above the third or fourth joint at which flowers are produced. The pods then fill sooner and better, are fit for market earlier, and the gathering of the entire crop does not occupy so many days.

The varieties of moderately tall-growing Peas which are best adapted for field culture are Pois Prince Albert, Caractacus, and Michaux d'Hollande, all smooth, white-skinned kinds; Express and Pois serpette vert, smooth, green-skinned kinds; Shah de Perse and the Blanc and Vert ridés nains, the Peas of which are large and wrinkled when ripe.

Amongst the dwarf Peas, the Nain hâtif, Nain anglais, and Serpette nain vert are the hardiest and most productive.

Some green-seeded varieties are gathered when fully ripe and sold as dried Peas. Such are the Pois nain vert gros, Vert de Noyon, and Pois carré vert normand.

Amongst Peas, as amongst Kidney Beans, there are varieties with tender, edible pods, which yield a heavier crop than the ordinary kinds which are shelled. Although largely used in the eastern parts of France and in Switzerland, these edible-podded kinds of Peas are not much known throughout the greater part of the country. This is a pity, as the crop is more easily grown than the ordinary kinds, and demands much less hand labour. However, I would not recommend anyone to commence growing these edible-podded Peas before they have become a regular and established article of public consumption. In the case of any article of food the demand should always go before the supply, otherwise producers must run the risk of meeting with serious disappointments.

#### POTATOES.

There is no crop to which it is more difficult to apply a dividing line between the domain of field culture and the province of the market garden than Potatoes. This remark is applicable not only to those varieties which are grown for the manufacture of starch, for distillation, and for the feeding of cattle, but also to the kinds which are cultivated for table use. There are, in fact, few cultivators who do not grow a certain quantity of Potatoes for the use of the farm domestics, and very often a considerable portion of the ground that was broken up for other crops is devoted to the culture of Potatoes for the winter markets.

With this crop, as with others, the profit is not always in direct proportion to the weight of the yield, but varies under different circumstances of weather and local preferences. Generally speaking, the latest and most productive kinds are the least remunerative in proportion to the weight of the crop. The half-early kinds of fine quality pay better, and the very early varieties which are taken up before they are fully grown and sold fresh from the ground

command the highest prices of all. These, on the other hand, are the most risky to grow, as they must be taken up and sent to market by a certain date, so to say, and sometimes when the grower's attention is claimed by some other work more urgent.

Of these three modes of growing Potatoes, the most suitable for field culture is the late cropping one, by which the tubers are grown for the winter supply and can be used at home or sent to market, as may be necessary.

As numerous varieties are well adapted for field culture, the choice must be guided by considerations of soil and climate, and, in a great measure also, by local preferences. In one place round Potatoes are preferred to long ones; in another place the long ones are most in favour. The colour of the skin is also a subject on which the tastes of purchasers differ. At Paris the white kinds are generally preferred, but the red varieties are not despised, provided they have yellow flesh. In the eastern districts of France the red kinds with white flesh, and in the central districts the round purple-skinned kinds are fairly popular. For exporting to England, large-sized, round, or oblong, very mealy, white-fleshed kinds should be grown.

In France, the kinds which find the readiest sale are:—

1. CHAVE.—A yellow-skinned, yellow-fleshed, round variety, of good quality and very much grown.

2. LESQUIN OR SEGUIN.—A round, yellow-fleshed variety, raised in the department of the Nord, of very good quality and keeping well.

3. MAGNUM BONUM.—A long, yellow-skinned kind, very productive and keeping well, but the flesh is a little too white to be universally appreciated in France.

4. SAUCISSE.—An oblong, red-skinned variety, with deep yellow, firm flesh. This is the kind which is most extensively sold at Paris during the winter months.

5. QUARANTAINE VIOLETTE.—Another yellow-fleshed kind, of very superior quality and keeping for almost any length of time.

6. QUARANTAINE DE NOISY OR MARJOLIN TARDIVE.—A long, yellow-skinned, yellow-fleshed kind, of most excellent quality, the most highly esteemed and highest-priced variety of all. The Jaune de Brie is only a somewhat later sub-variety of this.

Amongst the winter varieties I must mention the Pousse-Debout and Vitelotte, the tubers of which are of elongated shape and firm-fleshed. Those of the first-named kind are smooth, while those of the other variety are notched. Both kinds are in great request at Paris.

The varieties which are grown for very early and mid-season crops are usually quite different from any of those which I have here enumerated. These, if the market prices are high enough, are taken up and sold before they are fully grown; but if it would not be profitable to do this, or should any other motive operate to prevent it, they are left to ripen, and are sold later on when they are fully grown.

The varieties which are suitable for this mode of culture are very numerous, but the following ten kinds are worthy of special mention:—

1. POMME DE TERRE VICTOR, the earliest kind of all, is an excellent variety of recent introduction. The tubers are flattened, long or shortly-oblong, with yellow skin and flesh, and very regular in shape and size. When grown in the fields the tubers may be taken up in the first or second week in June.

2. MARJOLIN HATIVE ("Quarantaine" of the growers around Paris).—A very early variety, the tubers of which are closely crowded together at the base of the stalks. They may be taken up for table use when even half grown. This variety and Victor are the best kinds of all for forcing.

3. **ROYALE OR ANGLAIS.**—Almost as early as the Marjolin when true to name, but spreads more at the root and is more productive. The tubers are very nice-looking and smooth and of excellent quality whether fully or imperfectly ripe.

4. **PRINCE DE GALLES.**—A more productive and later form of the preceding variety, the tubers being of larger size and sometimes resembling a Pear in shape, instead of exhibiting the usual almond-like form of the Royale.

5. **FEUILLE D'ORTIE.**—A yellow-skinned, long, very early variety, with small-sized stalks and white flowers. It is grown to some extent as an early crop and merits the favour which it receives by the fine appearance and rapid growth of the tubers.

6. **CAILLON BLANC OR LAPSTONE,** exceedingly handsome in shape, very smooth and of excellent quality, is grown extensively in the vicinity of Avignon, whence whole truck-loads of this variety are sent to Paris. It is distinguished by the tubers having velvety purplish "eyes" or buds, and by the peculiarity which they exhibit in the skin turning purplish instead of green when exposed to the action of light.

7. **JOSEPH RIGAUT.**—A handsome, long-shaped, very smooth kind, coming early into growth, but sometimes somewhat irregular in this respect. One of the good varieties of recent years.

8. **MARJOLIN TÊTARD.**—An excellent kind, quite distinct, with large, roundish or slightly oblong tubers, which are always flattened, of a bronzy yellow colour, and with yellow flesh of very superior quality and texture.

9. **QUARANTAINE PLATE.**—An exceedingly productive as well as a really early variety. Tubers very uniform in appearance and of a fine yellow colour both in skin and flesh. When it becomes better known this variety will certainly be one of the most extensively grown for market supply.

10. **KIDNEY.**—An early, red-skinned, and very handsome kind, coming quickly to maturity. Tubers very regular in shape, with a bright red skin and yellow flesh. This variety is to be recommended for localities where red-skinned Potatoes are preferred to any other kind, and such localities are tolerably often met with.

Besides the foregoing ten varieties, which are specially early ones, the Quarantaine de Noisy, the Rouge longue d'Hollande, and other winter-keeping kinds may also be grown to come in in autumn.

At the Halle market in Paris the price of different varieties of Potatoes often varies from 2s 6d. to 6s. 8d. per cwt., so that it will be seen how important it is to grow varieties which are in favour with the public.

2. *Vegetables which, requiring a good supply of moisture, are best adapted for cultivation in valleys where the soil is either naturally moist or can be readily watered or irrigated.*

I shall deal more briefly with the vegetables belonging to this section, as their range is more limited and the interest they possess is not so general from the circumstance that they require to be grown under special conditions.

#### ARTICHOKES.

Artichokes grow best of all in soil which is moist, but well drained, valley soils that are naturally of a somewhat peaty character being particularly well adapted for the culture of this vegetable. Paris is in a great measure supplied with Artichokes from the valley of the Oise, Anjou, and Brittany, the winter supplies coming from Provence, the Eastern Pyrenees, and Algeria.

In the south of France the variety which is chiefly cultivated is the Artichaut violet or gris de Provence, an early and productive kind, with more scales than bottom or receptacle. In the districts of Oise and Aisne, as also everywhere in the neighbourhood of Paris, hardly any kind is grown except the Artichaut Camus de Bretagne, which bears broad, roundish

heads, flattened on the top. Receptacle broad, but rather thin.

A well-made and well-managed plantation of Artichokes may during the three or four years for which it continues productive yield a clear annual profit, after all expenses are paid, of from £24 to £32 per acre.

#### BETROOT.

Beetroot for cattle feeding is grown in the field soil of ordinary flat districts or plains, and varieties for table use can undoubtedly be grown in the same kind of ground. As these last-named varieties, however, are more highly prized when tender and young, I have thought it better to include them, along with the other kitchen garden roots, among the vegetables which prefer a moister soil.

The crop of the earliest varieties of Beetroot comes in about three months from the time of sowing, and no variety occupies the ground for more than four or five months.

In their order of earliness the following kinds are to be recommended:—

1. **BETTERAVE NOIRE PLATE NATIVE D'EGYPTE** has a round, flattened bulb with red flesh, slightly barred with white. Leaves slight, with a green and purplish marble colouring. When sown in April the bulbs may be gathered for use in June.

2. **B. ROUGE NAIN.**—Root long and slender, very deeply coloured; leaves of a dark purplish tint. An excellent kind and keeps well.

3. **B. ECLIPSE.**—Root spherical and of a dark red colour. A productive and very good kind.

4. **B. ROUGE RONDE PRÉCOCE.**—Root large, round and slightly flattened. A very productive variety.

5. **B. ROUGE GROSSE.**—The longest rooted and most productive of the kitchen garden varieties. This is the kind of which the baked roots are so largely sold at the Halle market in Paris.

6. **B. CRAUDAINE OR ECORCE.**—The skin of this variety is black and full of cracks like the bark of a young tree; the flesh, of a deep red colour, is very tender or melting and very sugary in taste.

#### CARDOONS.

These can be grown almost exactly in the same way as Artichokes, and, when tied up and blanched on the spot where they are growing, furnish a winter vegetable which always commands a remunerative price in the markets.

The Cardon de Tours is the dwarfest variety of all and produces the most solid chards. It has, however, the drawback of being spiny.

The C. d'Espagne and C. Puy are not spiny, but they take up more space in the ground and do not yield such regularly solid chards as those of the preceding variety.

#### CARROTS.

All the market gardens in France are unable to produce Carrots enough for public consumption, and a considerable proportion of the market supply is grown in the fields.

The varieties of Carrots all require a mellow, moist, and well prepared soil; the long-rooted kinds, moreover, need to have the ground deeply dug and manured, and for this reason the half-long or stump-rooted kinds, which can be grown with shallower tillage, are generally preferred.

The old Carotte rouge longue is now being more and more superseded by the Carotte de Saint-Vallery, which is thicker and more conical in shape, very smooth, and of a fine deep red colour.

Amongst the half-long or stump-rooted kinds the varieties Chant-nay and Luc are very productive, and the Carotte Nantaise and the Demi-Comte de Guérande are exceedingly tender and of superior quality. The other varieties are purely market garden kinds. According to the size of the roots of the different kinds of Carrots which are grown in the fields,

an acre of ground may produce from 5 tons to 12 tons, representing a return in money of from nearly £10 to £16 sterling.

#### CELERIAC.

We cannot regard this as a plant that will succeed thoroughly well without artificial watering; nevertheless, outside of gardens it may be grown on a large scale in soil that is naturally moist. The seedlings should be planted out in May or June, taking advantage of the occurrence of showery weather, and after this they will make growth without any artificial watering. Celeriac is still a comparatively rare vegetable and pays very well when sent to market, as it keeps wonderfully well all through the winter, and is valuable at a time when the vegetable supply is rather limited in its variety.

The varieties of Celeriac which are most to be recommended for field culture are the Céleri-rave d'Erfurt and the Céleri-rave pomme, which are small-leaved kinds with bulbs of medium size, regular form, and excellent keeping qualities.

#### CHICORY.

Several kinds of Chicory may be grown in fields, notably the wild species for the production of "harbe-de-capucin," and the large-rooted or Brussels Chicory, the shoots of which, when blanched under a strong pressure, afford the vegetable that is called "Witloof" by the Belgians and "Endive" by the greengrocers and women-cooks of Paris. At Coupvray, M. Jules Bernard had, last winter, more than 25 acres of ground under Chicory, and was by no means dissatisfied with the returns from the crop.

The soil for Chicory is prepared and the seed is sown in the same way as for Sugar Beet or Carrots; the seedling plants, however, are not thinned out so severely. In September or October the roots are taken up and prepared most carefully in ways which are described in special treatises on the subject, but which it would take too long to mention here. Crops of the two kinds mentioned above are, as they are grown at present, very productive. Besides, at the end of the summer, in localities where the soil is moist enough, a crop of curled Endive or of Batavian Endive may be grown, which will come to perfection during the autumn and can be gathered at the beginning of winter. The plants of these Endives are tied up so that the heart may be blanched, and the crop is very profitable at a time when green vegetables have become scarce.

The varieties of Endive which are the most commonly grown in this way are Chicorée de Meaux, C. de Ruffec and C. de Rouen, and, most of all, the Scarole ronde or Batavian Endive.

The Chicorée reine d'Iliver and the Scarole en cornet are hardier than any other varieties, and constantly withstand the winter in the open ground about Paris.

#### CABBAGES.

The field culture of heading varieties of Cabbage is always attended with a certain amount of risk, as the occurrence of a period of unusually dry weather, with its ordinary consequences of a check to vegetation and an increase in the numbers of the Haltica, or black flea, may place the crop in jeopardy. On the other hand, under favourable circumstances, few vegetables furnish such an abundant and profitable crop as Cabbages.

The soils which are most particularly suitable for the culture of Cabbages are those which are naturally moist or even slightly sour. Meadow land and land which has been recently cleared of trees or shrubs always yields the finest Cab-

bagas. Wherever a system of irrigation is of necessity established the water of which is charged with fertilising matters, Cabbages are the most suitable plants for utilising the superabundance of very nutrimental plant food. So it is that in the neighbourhood of Paris Cabbage growing is most extensively and most profitably carried on in the plain of Gennevilliers, which is irrigated with sewage water.

Amongst Cabbages, as amongst Potatoes, there are some varieties adapted for furnishing a winter supply, and others which, coming in earlier and not keeping for any length of time, must be cut for use as soon as the heart is fully developed. These last-mentioned kinds do not occupy the ground so long as the others, but a good market price for them is more uncertain.

Of the early kinds I may mention Chou Express, Chou hâtif d'Etampes, York, and Oxheart, all of which are too well known to need any description here. A variety which, on the other hand, is almost unknown in France is the Chou Jersey Wakefield, which originated in America, and appears to me to be one of the best early kinds for field culture in plains. It is a short, conical-headed Cabbage of a glaucous green colour, heating quickly and firmly and attaining a weight of from 2 lbs. to over 4 lbs. It withstands hot, dry weather in quite a remarkable manner.

Of the good late or mid-season kinds which yield heavily and keep well through the winter, or may be used in the manufacture of sauerkraut or as a preserved dried vegetable, the very best are the Chou Quintal or Chou d'Alsace, which is of large size, flat, and very firm; the Chou Quintal d'Auvergne, which is still bulkier and rounder in shape; the Chou de Brunswick, which, from the shortness of its stem, has been so appropriately named Chou Tabouret; the Choux de Winnigstadt and de Poméranie, which have conical-shaped heads, and the large-sized kinds, Choux de Milan, Milan des Vertus, and Pontoise de Norwège, the last-named of which can be left in the ground during the winter, so that the crop may be cut after all the other kinds have been cleared off.

Red varieties of Cabbage can also be equally well grown in fields, and these are often a more remunerative crop than the white kinds. Lastly, Swedish Turnips and Kohlrabi may be very advantageously grown in fields, especially if the seed is sown late, so that the plants may be somewhat checked in growth before attaining their full development. This has the effect of improving the quality very much, and if the plants have been left pretty thick in the ground, the total weight of the crop will be little, if anything, under the average.

#### GOURDS OR PUMPKINS.

There are very few districts in France where one may not see here and there a few plants of Pumpkins grown in the fields. In Touraine they grow the large Pumpkin (Citronille) for feeding cattle, and in the neighbourhood of Paris it is in the fields that Pumpkins are most commonly grown. This practice should become more widely extended, due regard, of course, being had for local usages and preferences.

Almost all the kinds of Gourds, especially those of medium size, may be grown without any artificial watering, and the number of kinds as well as of varieties of form is very considerable. The Vegetable Marrow is fit for table use when one-fourth or one-third grown, and the plant continues in bearing for two months together.

The curiously-shaped Custard Marrows and the Turk's-cap or Timban Gourds are much in request, not only for table use, but also for

decking the windows of restaurants, while slices of the smaller field Pumpkins find a ready sale in the markets.

#### TURNIPS.

Catch-crop cultivation, for which Turnips are so well adapted, may be employed to furnish varieties for table use as well as those kinds that are grown for feeding cattle. All that is necessary is to sow in the best prepared ground seed of early varieties which are in request in the markets of the locality. In this respect, as in many other cases, it is necessary to take into serious consideration the tastes and preferences of the locality, however arbitrary these may be. It is hard to say why the people of Paris do not like yellow Turnips, or why, in other places, long ones do not please the popular taste. Such prejudices as these are assuredly devoid of any justification, but when we have to deal with the public as our customers, we must conform to their notions and only endeavour gradually and skilfully to persuade them to adopt new ideas and use new kinds of vegetables, the more so as there is no lack of good kitchen garden varieties of Turnips, whether anyone wants them long, round, flat, white, red, yellow, or even black.

Of late years the farmers around Paris have begun to sow on their stubbles the small Navet de Milan, and they have found this a very profitable crop. The white and red early flat varieties Blanc rond de Jersey, Boule d'Or, and Jaune de Montmagny, and even the long tender kinds, such as the Navets des Vertus pointu and marteau, may be grown in this way for the winter markets, which are the most profitable and the least exacting in requiring produce to be sent in by a certain date.

#### LEEKs.

It is always a matter of surprise to me that Leeks are so little grown in places where cultivation is in other respects in an advanced state; while in some provinces at a distance from Paris one frequently comes across fields of Leeks or rows of Leeks growing interposed amongst other crops. And yet it is a vegetable that is always appreciated and its price is seldom lowered in our markets. Moreover, it possesses the very valuable quality of keeping well in the ground in winter, so that it can be taken up for sale when and as required. It would be a very exceptionally severe winter that would cause the hardy Leeks of the north of France to suffer from the cold. After a few months of culture they yield a crop more or less heavy, much heavier, in fact, and more profitable than many would suppose at first sight. When the ground has been well prepared and manured a large-sized variety of Leek, such as the Carentan, is capable of yielding, without any artificial watering or special attention, from 20 tons to 24 tons per acre, the plants being grown eight to twenty-five to the yard, according to the method practised. The clear profit per acre may easily range from £32 to £48 sterling.

The Poireau gros court de Rouen and the P. monstrueux de Carentan are very well adapted for field culture. Showing but little over ground they withstand frosty weather well. The Poireau long d'hiver de Paris may be planted more closely together. This variety commands the highest price at the Halle in Paris. Local considerations must always influence the cultivator in deciding which variety will be the best for him to grow.

#### SPINACH-BEET OR CHARDS.

This vegetable is not so much grown in France as it might be. Except in the vicinity of Lyons and in Provence, where it is uni-

versally grown, one very rarely meets with it in cultivation. And yet it would form a useful addition to the list of late-season kitchen garden products, which are not very numerous.

Chards are grown in exactly the same manner as ordinary Beetroot in any kind of good, free soil. Everyone knows the Poirée blonde commune, the leaves of which are eaten entire cooked like the leaves of Orache and Spinach. The leaves of the Chards may be used in the same way, but these have besides a broad fleshy stalk, the flavour of which is very peculiar and very agreeable, resembling that of the Cardoon combined with a delicate and slightly acidulous taste. The best variety is the Poirée blonde de Lyon, the stalk or chard of which is white. Until this vegetable, however, becomes better known and more generally in demand, it would be rash to undertake its cultivation (or anything like an extensive scale.

#### SALSIFY AND SCORZONERA.

Like the kitchen garden varieties of Carrots, these roots can be easily and very profitably cultivated in the fields. All that is required is to sow the seed in spring in well-dug ground in drills from 8 inches to 10 inches apart, and the subsequent treatment is limited to a few hoeings, in the course of which the young plants are thinned out if they have come up too thickly. In autumn the roots are lifted as required and sent to market in bundles of about 5 lb. weight each. Salsify roots must of necessity be all lifted by the end of the first year, as after this the plants, if left in the ground, will run to seed and become unfit for table use. Scorzonera roots may remain in the ground for two years and flower without losing their culinary value to any great extent.

In concluding this long review, let it be very clearly understood that it by no means expresses any intention of mine to advise farmers to adopt or even to attempt the cultivation of all the vegetables which I have here enumerated. If every farmer set himself mainly to grow vegetables for market, the market gardeners would have to give up business, which would be a great pity, since the division of labour is generally at the bottom of all solid progress. I must say that my purpose was to afford information, not advice. At the present day, more than ever, it is necessary to confine oneself to such branches of industry as one is able to carry out well, and which one's circumstances will permit of being undertaken with profit. Now, there are few farms on which the conditions of soil, climate, and proximity to or distance from a market would not enable the farmer to grow some kind of kitchen garden vegetable with profit. This branch of culture would bear to the general farm crops much the same relation of an accessory character as poultry-raising or the breeding of various animals, &c. It would certainly be of minor importance to the main products of the fields, yet at the same time would be no insignificant, but sometimes a very profitable, addition to them. In this respect the cultivation of kitchen garden vegetables in fields recommends itself to the attention of the farmer, and also because it forms a good school for educating the farm labourers.

Gardening, it has often been said, is agriculture in its highest form of expression, and it is a good model for the practice of field culture to have before one's eyes a few pieces of ground tilled and manured to the maximum degree, and largely repaying with their produce the outlay which such tillage has involved. This forms a school of advanced agriculture—of agriculture with enlarged operations and bringing in large returns.



FLOWER GARDEN.

GAILLARDIAS AND GYPSOPHILA.

Two charming and popular garden flowers are here illustrated arranged in a simple and pleasing way, which shows the characteristic beauty of each. The effect is as light and graceful as that of the most careful and intricate arrangements such as one sometimes sees, perfect examples of detailed elaboration, but which neither appeal to the eye nor give that sense of satisfaction which comes from such an arrangement as this of familiar flowers artistically blended, yet still showing their natural pose and form.

THREE KENTISH GARDENS.

ALTHOUGH Kent is called the garden of England, we are not (at any rate in the eastern part of it) famous for our private gardens. Those attached

between bedding out and herbaceous plants. The garden which surrounds Swinford Manor House is a compromise between the two systems: the ground in which the quaint old house stands is level. There is a good-sized lawn fronting the house in which beds are cut in the Grass, and filled both in spring and summer with either annual or half-hardy plants. At the time of my visit they were filled with Forget-me-not, rising out of which were fine yellow Tulips. Around this lawn and in beds under the windows of the house are to be found many herbaceous plants, of which there is a good collection, while in the garden at the back of the house some of the choicer varieties are cultivated. When the Forget-me-nots, Primroses, and other spring plants, of which there are a great number, are removed, their place is occupied by Geraniums, Begonias, Cannas, and other summer flowering plants. Roses occupy a prominent position. At the time of my visit, although the winter had been very severe, the Tea Roses were making vigorous growth. The weather which we have had lately has been of a very exceptional character, and I should almost have fancied the drought,

glaring character, and the plants which everywhere sprang up between them have some of them acquired considerable size and are evidently making their way in their new quarters. The garden stands in an elevated position, and although the severe winter had made some gaps, they were not so numerous as in some gardens I have seen on a lower level. A fine Judas tree has been killed, also many plants of Cistus, a class which seems everywhere to have suffered, while other things have stood remarkably well. *Romneya Coulteri* was in good condition, and Lilies, which have not generally done well here, seemed to be in a very flourishing condition. As everyone who grows herbaceous plants knows, the end of May is about as difficult a time for them as any; the early spring beauties—the *Gentians*, *Aubrietias*, *Anemones*, *Primulas*, *Scillas*, &c., are past, and *Irises*, *Paeonies*, *Aquilegias* and *Delphiniums* are not yet in. *Arenaria grandiflora* was in good flower and a striking species it is; *Ranunculus amplexicaulis* was here in quantity, and its beautiful white flowers make it very attractive. Then there was the showy *Orobanchaceae*, much superior to the ordinary variety, and a good clump of *Sparaxis*. I cannot understand why this genus should be so much more amenable to culture, whether in the open ground or in pots, than the very closely allied *Ixias*. The former I can grow on in pots from year to year, but the latter (although I grow imported bulbs) will do nothing the second season and very often but little the first. *Sisyrinchium grandiflorum* was also in quantity, and there was as well a very highly-coloured *Dodecatheon splendens*, a brilliant form of the American Cowslip, deep crimson in colour, with a yellow rim. This is one of the few places where the *Eremurus* has been successfully cultivated. Last year a plant of *Eremurus robustus* attained the height of 13 feet. This plant is again sending up a flower-stem, while *Eremurus himalaicus*, the most beautiful of them, is also showing strongly for flower. *Verbascum olympicum* was to be seen in various places not yet in flower, but it seeds itself freely all over the garden. This is generally considered a biennial, but I have now a plant of it making growth in its fourth year, but (whether this is the consequence of it I do not know) it never seeds at all. Its behaviour, to say the least of it, is eccentric.

MR. R. FREMLIN'S, WATERINGBURY.

This garden is entirely different from the other two which I have previously attempted to describe; it was to it that two years ago I made a pilgrimage for the purpose of seeing that fine Bellflower, *Ostrowskia magnifica*, and which I attempted to describe in THE GARDEN. It withstood well the frost of last winter, and although not now in flower, is making good growth and will, I have no doubt, in due time be a grand sight. The garden is extensive, on beautifully undulating ground, and is occupied mainly with flowering shrubs and herbaceous plants. Although standing high up, it did not escape the severe frosts of last winter; a large *Wistaria* was killed outright, and the large Rose tree, which I described as clambering up over an Apple tree, has also perished. Flowering shrubs are much valued here, and some of the best new varieties of Lilac, single and double, light and dark, were in bloom. Hardy Azaleas also contributed much to the gay appearance of the place, and large masses of herbaceous plants some feet in length, such as *Saxifraga Wallacei*, were very pleasing, while along the border where the *Ostrowskia* flourishes are collected a number of beautiful herbaceous things conspicuous either for their beauty or rarity. Probably the rarest of these is that beautiful New Zealand composite *Celmisia spectabilis*: the plant does not grow above 6 inches high, and the flowers are large, about 2½ inches across, white, with a golden centre. Like many of the New Zealand plants, it stands on the borderland between hardiness and half-hardiness, and I question its power, except in some favoured localities, to stand the severe cold of our winters. A mass of *Cypripedium spectabile* was pushing up strongly,



Gaillardias and Gypsophila in a vase.

to most of our large houses always were of a rather common-place character, and the old bedding-out system still survives in most of them. There are a few bright spots, such as Mr. Hammond's, of St. Alban's Court, though, I fear, that too is not what it once was. In Mid-Kent, however, I think the case is different, and I have lately visited one garden in my own neighbourhood and two near Maidstone, each of them differing in character, and all presenting objects of interest, and a brief notice of them may not be unacceptable to your readers.

"THE GARDEN THAT I LOVE."

I suppose that most of your readers know the charming little book in which under this title Mr. Alfred Austin has described his garden. Mr. Austin is a poet, and therefore thinks that a poet's garden should always be bright and full of colour, and so he has compromised the matter

which has now lasted for many weeks, would have injured them, but they seem to have withstood it remarkably well if I may judge from my own plants.

ST. HELEN'S, EAST FARLEIGH, MAIDSTONE.

This is a garden of herbaceous and alpine plants and there is no bedding-out either for spring or summer. Two years ago I visited and described in THE GARDEN what struck me then to be the most remarkable things contained in it. It was at a somewhat later period than my present visit, and consequently many of the plants I then mentioned were not as yet in bloom, but there was much of great interest, although, perhaps, the lateness of the season deprived me of the pleasure of seeing the *Irises*, of which Mr. Carrington Ley has an extensive collection, and since I was last there a good deal of the newness of the rock garden has worn off. The stones have become of a less

and, in fact, everything about the place showed marks of vigour—groups of Iris, large double and single Paeonies were noticeable. Lilies were also growing strongly, and will no doubt in due time delight those to whom this beautiful tribe is a never ceasing source of pleasure. Such is a brief notice of these three gardens, each so different, and yet each having its special claim on those who take pleasure, I will not say in old-fashioned flowers, but in permanent occupants of our garden borders, for it is remarkable how small a percentage of the plants we cherish in our herbaceous borders can be classed amongst these former. We have ransacked the world in order to gather together the most beautiful plants of the cold or temperate regions, and these are the plants which we most cherish. I do not think that we are likely to go into ecstasies over the old Columbines when we have those lovely kinds, hybrids from *Aquilegia chrysantha*, *A. coerulea*, and *A. Skinneri*, with their long spurs and varied colouring with which now without any trouble our gardens can be well stocked, as they are most free in seeding and are constantly visited by bees, moths, &c., so that we never know what colours we are likely to get. There is one other garden in the neighbourhood of East Farleigh where I am told herbaceous plants are in great favour, but which I have not had an opportunity of visiting. I hope to go some time in the summer, and may, perhaps, be able to say something concerning it in the pages of THE GARDEN. I must also note a plant which I do not often see—*Lithospermum canescens*, not of the intense blue to which we are accustomed in some of the other species of this genus, such as *prostratum* and *Angastoni*, but of a bright yellow: it was only just beginning to show its colour. DELTA.

#### NOTES ON HARDY PLANTS.

*Spiræa arguta*.—This is now getting popular in gardens, and well does it deserve the honour of a conspicuous place. It is one of those subjects that cannot be over-praised. It chanced that one of perhaps the oldest specimens of the kind is here, and as it had grown too large for its place, was freely cut back in the autumn of 1893, and the bush was both improved in shape and the flowers have been more numerous and in bolder pose than ever this spring. So striking was the bush at one time, that one could not refrain from going to it many times a day, when one's eyes were dazzled by its pure whiteness, lines of arching twigs, touched off at their points with thin black points, resembling tasteful appendages of thread or cord. About a well-grown and flowered specimen there is both symmetry and elegance. The stature may be anything from 2 feet to 5 feet.

*Andromeda fastigiata*.—For seven weeks this has been white all over with its hundreds of wax-like little bells. It has the reputation of being hard to cultivate, but it is not so if granted two requirements, which are not hard in most cases, viz., fairly pure air and a position where not only its peaty soil is kept fairly moist, but the atmosphere, for instance, in a slightly shaded place and among numbers of other shrubs, which help by leaf evaporation to keep the air soft, like that of a wood bottom on a hot, dry day. This seems essential from the peculiar and scale-like character of its leaves, which hardly look like leaves at all. Unless these are well sustained by moisture both from within (their roots) and without, the leaf-enveloped stems soon go soft and are restored to plumpness with difficulty. I find for pot specimens that cocoa-nut fibre or damp peat answers admirably as a plunging material. With regard to pure air, I am not favoured with this by any means, but it is not very bad relatively to that of some districts near big towns, being on the west side of Leeds, the prevailing winds bring almost pure air from the distant hills.

A pleasing blend of flowers, which to my mind suggest either a bedding idea or harmonious groups, occurred here in May, and up to the

present has grown more bright or effective, and, owing to the long endurance of the flowers and also the succession, bids fair to last some time longer. The white flowers are the feathery panicles of *Saxifraga pyramidalis* and *S. cotyledon*, and the pale blue or mauve, the spikes of corresponding stature of *Nepeta Mussini*. The *Saxifragas* are in a good-sized mass of 100 plumes or more, the *Nepeta* plants are interspersed somewhat thinly, and then finished by thickly flanking the white. Both these are perfectly hardy and will stand for years in the same place. Both also enjoy a somewhat sunny and dry position.

**Choice early Saxifragas.**—A capital set of eighteen or a score comprise the under named, as tested for reliable hardiness and free-flowering after an exceptional winter like 1894-95: *Kotschyi*, *Bursleriana*, *B. speciosa*, *Bursleriana* seedlings in variety (white, cream to yellow), *Boydi alba*, *Boydi* (yellow), *oppositifolia* in three or four varieties, *sardica*, *marginata*, *Malyi*, *luteo-viridis*, *Rudolphiana*, *sancta*, *Cymbalaria* (annual), *biflora*, and *peltata* (before the leaves, a very large species).

*Aletris farinosa*.—I was surprised to find this had not only survived the winter on an open rockery (the base), but to see it sending up a spike. The flower-spike, however, has failed to develop beyond 3 inches, owing, I believe, to the very hot position during early May where a great amount of heat is trapped, which by other plants as well as by the *Aletris* has been resented. Still the plant is growing, and that is the chief point of this note—its hardiness against 30° of frost.

*Gentiana ornata*.—This is another instance of a pleasant surprise. The one plant I left out on an exposed situation without any protection whatever is now a far more sturdy specimen than any of the set stood all winter in pots and in a cold frame. It is, therefore clear to my mind that whatever may have been the cause or causes of the death in past years of this Indian species, it cannot have been cold merely. Possibly it may have been cold and wet with sudden changes in winter; if so, we can in a measure guard our plants against the wet. The cold, however, we cannot well escape, and it is well to know in this case that cold alone has not been the death of the plant.

*Courisia coccinea*.—I saw this promising well for flower in the rock gardens of Mr. Alfred Sykes, The Tower, Cookridge, the other day. It was being grown in a flat position, and as I observed where the plant had run to the side of a cropping mass of rock, and consequently got a little shade, the flower-spikes were more numerous than on the more exposed portions of the plant.

Woodville, Kirkstall.

J. Wood.

#### FLOWER GARDEN NOTES.

**SWEET PEAS.**—These flowers entered rather largely last year into the summer decorative work required about the mansion, and they were so satisfactory as to warrant an increased supply for the present season. For covering a long stretch of wirework they were sown in boxes in February and had the shelter of a cold frame during the exceptionally severe weather experienced throughout that month. The boxes were transferred to their summer quarters about the middle of May, and the Peas as they progressed in growth have been lightly secured to the wirework by lengths of twine. Sweet Peas also this year take the place of some tall plants of Japanese Honeysuckle that have hitherto been used for clothing iron pillars, and which were so crippled by the severe winter as to be practically useless for the present season. For this latter work the Peas were sown thinly in pans, 1 foot square by the same in depth; they are now just coming into flower and will look very well indeed. Where roots are confined in pans or boxes very liberal doses of liquid manure must be given as soon as the plants commence to flower to keep the growth moving rapidly, and all decayed flowers must be promptly removed. I

have found Emily Henderson and Firefly two capital sorts for this particular work. Those who provided a deep tilth and a liberal supply of manure for those outdoor borders where Sweet Peas were sown will be the most likely to secure a good and continuous display of flower if the weather keeps hot and dry. A heavy surface mulching and a good soaking of water is, of course, very beneficial, but in the majority of places outdoor flowers in any shape or form cannot often receive such attention at a busy time of the year.

**FLOWERS FOR PRESENT CUTTING.**—The season of *Pyrethrums*, *Aquilegias*, *Paeonies*, hardy *Azaleas*, &c., is getting a little over, and one has to hunt about to find other things to help out with the *Roses*, and the demand for cut flowers is on so extensive a scale, that it is not always an easy matter to meet all requirements continuously right away through the season. Nearly all hardy flowers, however, fortunately adapt themselves to vase work, and that being so, it is most important to take note of any weak point in the succession available, and to see the particular varieties required in quantity at such a time are strengthened by increased propagation when the time for this is at hand. In shrubs, *Weigelas* in variety have been useful up to the present time, and their place is now filled by the large-flowered *Syringa*, *Philadelphus grandiflorus* and the single and double forms of *Deutzia scabra*. Whilst on the subject of white flowers I may note that a good outdoor breadth of *Spiræa japonica* is always very useful, and the season may be considerably extended by having two such breadths respectively on south and north borders. I noted some time back the planting of *Foxgloves* in quantity among brakes of small seedling *Rhododendrons*, and from the present time (June 5) onwards for several weeks their spikes will be very acceptable. As in the case of the *Spiræas*, the season can be considerably extended by planting in different positions. A batch of *Delphiniums* planted in a similar site is supplying just now the various shades of blue. A lot of *Iris germanica* are still to be had from old established clumps, and a batch of the smaller Spanish *Iris* planted early last winter is coming out fast. Plenty of sun and the dry time has been answerable for an early development of flower on the varieties of *Phlox suffruticosa* and the large heads will soon be out. This is, however, one of the flowers I am always very loth to cut unless we are hard pressed, as given a considerable number of plants together, the magnificent heads have a very fine effect, and once shorn of their bloom the plants have a very formal, stick-like appearance. Another plant showing flower somewhat earlier than usual is the *Pentstemon*, long spikes of which are very acceptable for tall vases. Poppies increase in favour with each succeeding year for light and graceful vase work, and we have this year considerably increased the size of the breadth sown. The *Shirley* and *pavoninum* (annual) and the varieties of *nudicaule* (perennial) are the favourites. Very charming dinner table arrangements can be made with these Poppies associated with a choice assortment of ornamental Grasses culled from a neighbouring meadow. Looking through a large breadth of Pinks in several varieties that were planted specially for cutting, I see that Ernest Ladham's is considerably later than any other sort we have. This will just hit the season nicely between the bulk of the Pinks and the earliest border Carnations. Scattered about here and there among the Pinks are a few nice clumps of the Sea Lavender (*Statice latifolia*), which answers for autumn the purpose served by *Gypsophila* through the summer months. Our plants of this *Statice* were very sickly at the end of 1893, so I shifted them from the place they then occupied, cut them up, and replanted (doing them thoroughly well) on the border that was presently to be filled up with Pinks. The growth made in 1894 was very weak, and we had none of the handsome panicles of flowers, but this year the clumps are coming away strong and well. Writing of two plants whose flowers from July until the end of the year

are used as a substitute for foliage reminds one that for the supply of foliage on a large scale for a similar purpose there is nothing to equal the common Asparagus. It is not advisable to be continually cutting from permanent beds that are in use for culinary purposes, so to secure lengths of foliage for the flower basket, a little seed can be sown thinly in drills at 2 feet apart in some corner of a slip garden any time early in spring. It will naturally be of little use the first season, but can always be relied on afterwards to furnish a bountiful supply. It is not in every garden that the well-known seaside shrub that seems to revel in the salt spray (*Tamarix gallica*) does thoroughly well; where, however, this is the case, long and elegant sprays of foliage can be obtained in quantity from old-established plants.

**DAHLIAS.**—Where earwigs are troublesome, they are bound to muster in strength after the prolonged spell of hot, dry weather, and it will be found advisable to put the stakes to the Dahlias at once even if the plants are rather small, and to place inverted flower-pots containing a little dry hay on the top of the stakes with a view to entrap the enemy before they have time to work much mischief. Where the cultivation of Dahlias is more a matter of strengthening the supply of late summer and autumnal flowers for cutting rather than obtaining blooms of extra size and quality, it is advisable to plant the very free-flowering varieties in the Cactus, decorative, and pompon sections. All these are also fine subjects for large beds; a thin planting of Constance, for instance, filled in with Fire King makes a very effective bed, whilst in the pompons very effective combinations either in decided and well chosen contrasts, or in a mingling of the softer colours, as represented by such varieties as Countess von Sternberg, Dora, E. F. Junker, Fashion, Grace, Midget, and Pure Love, can be produced. E. BURRELL.

Claremont.

**Iris flavescens.**—This German Flag should be cultivated by all who admire this section of the Iris family. It is a very strong grower, the strongest of a collection of twelve varieties that were planted in clumps of six four years ago. *I. flavescens* has now developed into a mass 10 feet in circumference, which has this year thrown up thirty-five flower spikes of pale yellow flowers, which are more lasting than those of many of the other named varieties. The German Irises will grow in almost any situation, from a steep embankment to a moist bed, but it is necessary that they should be afforded opportunity of enjoying the sunlight. Good varieties are *Iris pallida*, *I. pallida dalmatica*, *I. flavescens*, *I. florentina*, *I. Madame Chereau*, *I. Prince of Orange*, *I. Princess of Wales* and *I. Queen of the May*, all of which are attractive forms. *Flavescens* is certainly the best doer of the foregoing, and if but one variety is grown this should be chosen, the best two for effective contrast being *flavescens* and *pallida*.—S. W. F.

**THE SWEET SULTAN.**  
(*CENTAUREA MOSCHATA*.)

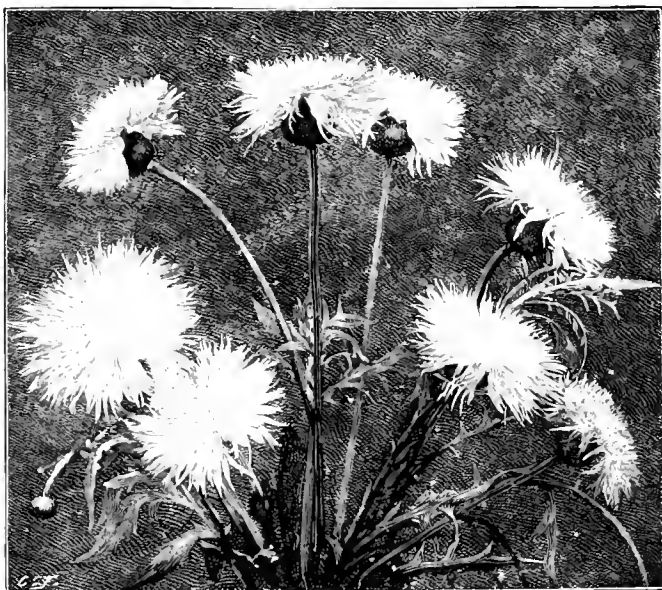
This charming old annual is not often seen well grown in gardens, but it is a pretty flower for the garden or the house, and well worthy of the care needed to ensure its healthy growth.

Perhaps the most essential thing is that the soil contains lime, as if this is deficient the plants make a puny growth and flower prematurely or die altogether. Soils not naturally calcareous may be made suitable by the addition of lime rubbish. Another point is to sow the seeds where the plants are to grow, and as soon as they are large enough thin them out to about 9 inches or 1 foot apart. There are two distinct shades of colour, one pale purple and the other creamy white. The Sweet Sultan is much grown for the market. The flowers, with their long stems, are admirable for gathering, and their pleasant fragrance is not the least of their charms.

**ORCHIDS.**

**SCUTICARIAS.**

This is a small genus containing not more than three or four distinct species, but these are very remarkable Orchids in appearance and very



Sweet Sultan (*Centaurea moschata*).

singular in their manner of growth. Botanically they are closely related to *Maxillaria*, but the resemblance goes no farther than the flowers, the habit being entirely different. *Scuticarias* are all evergreen epiphytes with very short stems and long cylindrical leaves, found growing naturally on trees in equatorial America. The flowers occur on short stems; not usually more than three form one growth. These Orchids will grow in a *Cattleya* house temperature, but are far more satisfactory if treated to more heat, thriving well during the growing season with the deciduous section of *Dendrobiums*. A constantly moist atmosphere during this period is essential, and the plants must never be allowed to be dry at the roots, this latter being the most frequent stumbling-block to the successful culture of *Scuticarias*. The roots are fairly large and fleshy, and when covered with a little growing *Sphagnum*, no great amount of care will be needed, and this treatment will be found far preferable to bare blocks. They may be grown either in baskets or on blocks, but if the latter they must be of good size in comparison with the plants, as small blocks part with the moisture too readily, and do not give sufficient

root-hold. A good deal of sunlight is necessary for these Orchids, no flowers being produced if grown in a dense shade. They are not constant in their habit of growth or time of flowering, but if possible they should be fairly excited in spring so as to get the growths ripened as the sun is waning in autumn. The winter treatment of such plants consists in keeping them moist enough to prevent the leaves from shrivelling and dropping off, at the same time avoiding too much watering. Plants that grow away during the winter must be carefully treated, and a routine arranged as near as practicable to the conditions obtaining at their natural season, this being better than attempting to dry them when they seem inclined to grow, or to excite them when quiescent.

*S. HADWENI* is a somewhat rare and variable species, introduced in 1851 from Brazil. The leaves are usually pendent, occasionally erect, growing about 18 inches in length, pointed, and grooved on one side, deep green. The flowers are 4 inches across, the sepals and petals yellowish, blotched and barred with brown. The lip is broad, wavy on the margin and hairy; it is white, with rose markings. There are several varieties of this plant, differing chiefly in the disposition and tints of the spots. The best known kind in the genus is

*S. STEELI*, a most remarkable species, popularly designated the Whip Orchid. In this the leaves attain a length of 4 feet and upwards, not much thicker than a lead pencil in any part. The flowers occur in twos and threes, and are individually 4 inches across, pale yellow on the sepals, with chocolate markings, the lip creamy white, with bright purple radiating lines. This was introduced from British Guiana in 1834.

*S. KEYSERIANA* is closely allied to the latter species and is identical in habit, but bears larger and brighter coloured flowers. This was first exhibited by Messrs. Sander and Co. in 1888.

H. R.

**CYPRIPEDIUM CAUDATUM.**

This remarkable and beautiful Orchid is now flowering freely, and owing to the peculiar tail-like appendages from which the species takes its name it attracts a good deal of attention and admiration. It belongs to the *Selenipedium* section of the genus and produces from two to four flowers upon the scape. The culture of *C. caudatum* is not difficult, nor is the plant at all fastidious with regard to temperature, thriving well in the *Cattleya* house, but better in more heat or a full stove temperature. Here the plants positively enjoy life, producing stiff, leathery leaves of that beautiful deep green that all growers of *Cypripediums* like to see, the flower-scapes being also more vigorous and healthy. These green-leaved varieties do not seem so sensitive either to watering overhead; if not given too heavily or often, it is decidedly beneficial by clearing away accumulated dirt or insects. Soft, or rain water must, however, be used, as hard water leaves a white sediment behind on the leaves that is very disfiguring and difficult to remove. The compost for this Orchid must be very free and open, nothing in the least likely to become sour being retained. Fibrous loam and peat in equal proportions and with all sand and earthy parts sifted out, *Sphagnum* Moss and charcoal will be an ideal compost, and the drainage must have very careful attention. Water must be plentifully supplied at the roots at all seasons and the plants grown as strongly as possible, this being the true secret of success with this species. Small, puny growths have not the strength to flower well, if at all. As the plants get stronger and produce more vigorous growths, fine healthy flower-spikes will follow. The best time to repot is very early in spring, and although *Cypripediums* dislike being disturbed it is far better to repot biennially, or even annually if need be, than to allow the plants to sicken from the effects of a close, soddened compost. The typical *C. caudatum* is a native of Peru and bears yellowish

and brown flowers of varying tints, the colour usually brighter towards the tips of the petals. These latter have been known to grow to a length of upwards of 30 inches, the effect of a good plant in flower being very striking. The variety *C. c. Lindeni* is supposed to be a freak of nature or monstrosity. The lip of this form is said to be of the same character as the petals, instead of the usual pouch. This was found in 1848 growing at a great elevation on the Cordilleras in deep, shady woods. *C. c. roseum* is a very bright-coloured form, discovered by Warszewicz growing on the tops of trees in elevated positions in Chiriqui. *C. c. Wallisi* has shorter petals and is large and very distinctly coloured. The sepals are white, veined with green, and the lip is also white at the opening. R.

#### SEASONABLE NOTES ON ORCHIDS.

Up to the present season has been very favourable for the growth of Orchids, and the plants in the East-India house are looking especially well. *Dendrobium*s are growing very freely and can hardly be kept too moist at the roots, those that were reported having by now obtained a good hold on the compost. In order to give light and room for the new growths, we have cut away many of the old pseudo-bulbs both from the evergreen and deciduous kinds, as although these of the former may have given a chance spike or two, the advantages aforesaid are decidedly greater. *D. Cambridgeanum* has been making a pretty show and is getting past its best. The pseudo-bulbs are well finished and it will now be hung in a cooler, more airy structure, but still kept fairly moist at the root. After the leaves fall this species likes a short rest, and I have usually placed it in the open air for a time, returning it to the Cattleya house on the approach of cold nights, and when seen to be again starting placing in the warmest house. Plants of *D. chrysanthum* that are finishing their growths must not be dried, nor do they need the same amount of ripening as the deciduous species generally. The flowers are always finer and better in colour if the foliage is retained until they are nearly or quite open. *Cypripedium*s must be carefully shaded now, an hour's exposure to bright sunshine ruining the appearance of many of them, especially those with the darker, more tessellated foliage. These all require an abundance of water at the roots now, needing attention almost daily. What a gem is *C. Schlimi* where happily situated, the plants being nearly always in flower. The heat of the East India house is too much for this kind at this time of the year; but give it a position in a shady house that does not go much above 75 at any time, with a constant supply of moisture to the roots and it is indeed at home; here the spikes are finer and the foliage attains a much richer tint owing to the complete immunity from insect pests, impossible in a very warm house. In the Cattleya house *C. Mossia* is getting over, but *C. Warneri* and *C. Gaskelliana* are coming into flower. The old Brazilian *C. Forbesi* is apparently not much grown, nor can it compare with the *labiata* section for size or brilliance of colouring. It is a slender growing species, somewhat resembling *C. intermedia*, but the flowers are yellowish with purple markings on the lip. The latest plants of *Miltonia vexillaria* are now showing the buds, the earliest being over. This species does not rest very long as a rule, the growths appearing at the base of the flowering pseudo-bulbs soon after their beauty is past. There need be no hurry in repotting the plants, a suitable time being late in August or September, when the growths are well on the move. Cleanliness is, however, necessary at all times, and frequently, owing to the dry atmosphere of the flowering house, thrips make a little headway at this season. If this is seen to be the case, no time should be lost in effecting a riddance of them before they attack the young shoots, for if they are allowed to do this, no after treatment will be really effectual. *Anguloa Clowesi* is now flowering in the cool house, the peculiarly constructed lip being very attractive; on account of its rocking motion it has

gained for these the name of Cradle Orchids. These like a substantial compost and should be seen to immediately the flowers fade. Rough fibrous peat and loam with chopped Sphagnum and potsherds will grow them well, and as they require abundance of water, the drainage must have special attention. *Odontoglossum citrosimum* is growing freely, and as the cool house is so heavily shaded, we grow this in the cool end of the Cattleya house, the additional sunlight and heat causing a more solid and therefore floriferous habit of growth. The *crispum* section, and also *triumphans*, *luteo-purpureum*, and others of this class cannot now be kept too cool, a free growth of the Sphagnum about the bases of the pseudo-bulbs being also of great advantage.

Fire-heat has now been dispensed with in all departments, the warm house not falling below 60, though a little air has been left on the lower ventilator. This induces a fresh, cool night temperature such as all Orchids delight in, the moisture collecting on the plants in the form of dew keeping them cool till well on in the day. The Cattleya house is kept as near 55° as possible, though a few degrees less does no harm, and the cool house is left wide open at night top and bottom, nearly closing it during the day and shading heavily. H. R.

**Epidendrum Wallisi.**—This very interesting species grows from 4 feet to 6 feet in height, and it is seldom so fine a specimen has been seen in bloom as that in the collection of Mr. G. Fowler, of Glebelands, Woodford. This specimen has eight fine well-developed spikes of flowers, which are exceedingly showy and effective. The blooms each measure about 2 inches across; the sepals and petals clear bright yellow, spotted sparingly with deep brown; the lip large and spreading, white, streaked and spotted with purple, with three prominent raised lines of yellow at the base. The stems are erect and slender, and spotted with a purplish colour between the nodes. This desirable plant is a native of New Grenada, where it grows upon the Western Cordillera at some 5000 feet or 6000 feet elevation. It is one of the finest kinds in this large genus, and will continue producing flowers for several months in succession. —W. H. G.

**Maxillaria tenuifolia**—This quaint little Orchid is now in flower, and fills the house with its peculiar perfume. This is different to that of any other kind that I know of, and has been likened to salt butter. The pseudo-bulbs of this species are produced one above the other on the erect rhizomes, and unless given new compost about every third year they soon get weak. The foliage is long and narrow; hence the specific name. It flowers freely, and the flowers are about a couple of inches in width, bright yellow, spotted all over with crimson. Being small and not particularly showy it is not much grown, but one occasionally comes across a good specimen, and when covered with the bright little flowers they are by no means unattractive. It is very easily grown, thriving in the coolest part of the Cattleya house in pots with a mixture of peat and Sphagnum. Plenty of water is needed while growing, and even during winter they must never be dried. *M. tenuifolia* is a native of Mexico, having first flowered in England at Chiswick in 1839. —R.

**Odontoglossum Alexandræ** was one of the principal features at the Temple show last month, when several novel and rare forms were shown. Independent of the finely spotted varieties there were some pure white kinds of exceptional merit, and which would make admirable companions to *O. crispum virgale* mentioned in THE GARDEN of May 18 last. The best was perhaps that shown by Messrs. Sander and Co., of St. Albans, and which was named *O. crispum Duchess of York*, the raceme carrying a fine spike of bloom. The individual flowers, although somewhat small, were of the purest white, excepting a golden yellow disc on the lip. Another variety shown by Baron H. Schneider named *O. crispum xanthotes* was also remarkable for its chaste and pure white

flowers, which, although of larger size and better substance than the above, were not pure white, having in addition to the yellow crest a few very pale yellow spots on the sepals and petals; this, however, marks it at once as one of the most distinct. This may not be a complete list of the pure white varieties, but they do not appear to be at all numerous; the majority, although having pure white sepals and petals, are more or less spotted with reddish brown on the lip, or have the segments flushed with a mauve tint. These white and tinted varieties are mostly found in localities lying from about twenty to thirty miles south of Pacho.—W. H. G.

**Lælia grandis tenebrosa.**—This splendid variety of *L. grandis* is apparently far from constant in its time or manner of flowering. I have known it to flower at once on the newly formed pseudo-bulbs after the manner of *Cattleya labiata*, but more often it rests through the winter, carrying the sheath and produces its flowers late in spring or early summer, like *C. Mossia*. But whenever the flowers come they are invariably welcome, the rich tints of purple and rose being very distinct and of an unusual character in the genus. The plant is of a strong, erect habit of growth, the pseudo-bulbs varying a little in form, and each bearing a fine large leaf. No difficulty will be found in its cultivation in a house where the usual run of *Cattleyas* and *Lælias* are satisfactory, but for preference a large, roomy structure should be chosen. Rather large pots should be used, as the roots are exceptionally vigorous and of a rambling tendency, and the compost must be well aerated and used in a rough condition. Though liking a good clear light, it must not be placed too near the roof glass, being more satisfactory at least a yard away. The flowers are large and showy, each measuring 7 inches across. The sepals and petals are spreading, brownish purple, and the lip is broad, slightly frilled at the margin, deep purple. There is, however, a good deal of variation in the flowers, but all are strikingly beautiful.—H.

#### CYCNOCHES CHLOROCYLON.

The Swan Orchids, as they are popularly known, are not remarkable for either showiness or bright-colouring, but several of the species are very interesting and possess considerable beauty. The species under notice is perhaps as much grown as any, and will compare favourably with the others as a garden plant. It has stout, fleshy green pseudo-bulbs, which on strong plants attain a height of about 15 inches, and these bear several broad leaves upwards of 1 foot in length. The flowers are produced in curving racemes, each carrying from four to ten, individually about 5 inches across. The sepals and petals are yellowish white, the lip pure white, with a yellow or green blotch in the centre. The column is slender, elongated and curved, the end containing the pollen, swollen into an irregularly oblong knob. The plants usually grow well the first few seasons after being imported, but frequently show a disposition to go back afterwards. This is not always the case, as I know of plants that have been under cultivation for at least a dozen years, and these are really better now than they were five years ago when I first saw them. The chief points in their culture are good drainage and a very distinct resting and growing season. They are best grown in pots in a compost consisting of good loam fibre, chopped Sphagnum and peat in about equal proportions, with a few small pieces of potsherd or charcoal to ensure a sound and well aerated medium. They like a light position and plenty of heat and atmospheric moisture while growing, being well suited if given a place alongside the deciduous *Dendrobium*s, care being taken that the foliage does not suffer from too bright sunshine. This will not occur if the atmosphere is properly moistened at closing time, as a film is thereby caused to collect over the glass sufficient to keep them safe. From the time growth is well on the move until the pseudo-bulbs are complete they cannot well be over-watered if

the drainage is good, but avoid wetting the leaves with the syringe, as the water is very apt to collect in the young growth, causing this to decay. As soon as the leaves begin to turn colour in autumn the water supply must be diminished and almost wholly withheld during winter. At this season the plants are best in a light, airy house that never falls below about 52°, as if kept too cool there is a danger of a black spot attacking the pseudo-bulbs, which is very difficult to arrest if once it obtains a hold on the plants. Early in the new year the new growths will be seen to be starting and the compost should then be put in order if this is necessary. A thin surfacing of Sphagnum Moss is beneficial, as it keeps the roots moist without continual waterings, and the plants must be at once placed again in the warm house, when they will flower about the present time. *C. chlorochilon* is a native of Demerara, whence it was introduced in 1838. H. R.

## KITCHEN GARDEN.

### VALUE OF DEEP CULTIVATION.

THE present season undoubtedly shows the advantage of deep digging, for in districts where but little rain has fallen the crops on ground that was not well tilled are in anything but a satisfactory condition. In this neighbourhood we have only had just over a quarter of an inch of rainfall since April, and the soil has got so dry in places that the Grass presents a burnt-up appearance. In gardens also where the ground was not deeply dug the crops are suffering seriously from the effects of the dry weather. Early Peas that should be at least 4 feet high have not exceeded 18 inches, and many others in like manner show the want of nourishment in the soil. Where ground was deeply dug and well worked, the roots have been able to penetrate in search of moisture, and on such vegetables in general are looking well. Potatoes with us have never been more promising, as we had no late spring frosts this season to injure them. Peas, though a little late, are doing well, and except for the slugs, which were so troublesome in April, would never have been better. Gradus that was sown in pots and planted out in March is now giving us a good supply; the same may be said of the Duke of York. These Peas were said to be of medium height, but with me they are quite 5 feet even in this dry season. They do not grow the same in all gardens, however, for in some in this district the haulm is not more than 18 inches, but the ground had not been either deeply dug or well tilled; hence the dry weather has taken hold of them. Cauliflower in some places is almost a failure, but where the ground was in good heart and deeply dug they look well; the same may be said of Cabbage and others of like nature. There is a vast difference in the crops on poor, shallow ground, for many of them look very sickly, even where water has been afforded them, to say nothing of the extra labour entailed in such work. Where the soil in kitchen gardens is shallow, every means should be taken to increase its depth, and though this cannot always be done in a season or two, still with perseverance in due time it may be rendered fertile to a depth of 2 feet or even more. I would not, however, recommend trenching, so that the poor barren subsoil is brought to the surface, but by adding manure and loosening up the ground an inch or two more each season, there will soon be sufficient depth for the roots of most crops. Digging is usually done at a time of year when work is not so pressing; therefore there is no reason why pains should not be taken to do the work well. Most old gardens were well made in the first instance, for where the soil was shallow more was added till a sufficient depth was found for all crops, and this to some extent accounts for the excellent vegetables produced in them. There are, however, favoured places where the soil is naturally fertile for some depth if it were only handled in the right manner. I have long advo-

ated deep cultivation for all vegetables, and though some are only shallow rooting, they may be succeeded by others that require a considerable depth of earth to grow them well. If ground is properly dug in wet seasons this will act as drainage by allowing the superfluous moisture to pass through, while in dry seasons the roots are able to penetrate to such a depth that the weather has but little effect on the plants. H. C. P.

**Preparing for winter Onions.**—This note may seem uncalled for at present, but from the fact that the firmer the ground is at sowing time the better chance the crop has, timely preparation is certainly advisable. It is a good plan to utilise the plot from which early hand-light or the first transplanted Cauliflowers have been cleared, and as this has been subjected to a continuous traffic since last autumn in order to attend to the wants of the plants, air has to a great extent been excluded from that portion between the rows. This plot, therefore, needs turning up and exposure before another one is sown or planted on it, and winter Onions will be the best to follow the Cauliflower. Sometimes Cauliflower roots are much infested with grubs, and a percentage of these pests are, of course, left in the ground when the old stumps are pulled up. These need eradicating, and in the necessary preparation for the Onions this is effectually done. In the first place wheel on to the plot an abundant supply of good manure, a fair amount of soot, a little gas-lime, and if at hand some burnt refuse or wood ashes. Then take out a good wide trench at one end some 15 inches in depth, and after spreading and mixing all the ingredients on the surface proceed to throw forward the soil into the trench, thoroughly incorporating the manure, soot, and lime as the work proceeds. Thus the young seedlings will have a rich larder from the start instead of having, as in the case of ordinary trenching, to wait until three parts grown before the roots reach the manure. Trenching completed, give a good treading, repeating it in a month's time and again at sowing time.—C. N.

**Good dry weather Potatoes.**—Various Potatoes, like some sorts of Peas, stand a dry season far better than others, growing better and not giving way so soon. As belonging to this section may be mentioned Early Puritan and Snowdrop. These two varieties are doing well with me on a light soil and with an almost total absence of rain for many weeks. Both Snowdrop and Puritan have now (the second week in June) good tubers fit for lifting, the sets having been planted in the third week in March, and growth, of course, protected. Snowdrop ought to be more largely grown, it being a good cropper, handsome, and of unsurpassed flavour, and keeping well until Potatoes are ready again in spite of its being a second early sort. Mr. Tallack, of Livermore Park, last year wrote in praise of Snowdrop, it being, if I remember right, his favourite Potato.—J. CRAWFORD.

**Chilies and Capsicums.**—These are much valued in many gardens, especially where sauces and pickles are a speciality in the dining-room. The plants will now be in free growth, and will need shifting on into pots a size larger before they become in the least pot-bound. A moist growing atmosphere is essential for their well-being, means being taken for preserving the foliage free from insects. Both spider and green-fly are great enemies of the Capsicum, thus necessitating the free use of the syringe twice daily. Sometimes the fruits set too freely, and if all are allowed to remain till matured, the plant makes poor growth, and the weight of fruit in the aggregate is smaller than when judicious thinning is practised. The yellow varieties grown by some for ornament are most attractive in autumn and well repay good culture. Good loam and a free admixture of rotten manure suit them best, feeding with farm-yard manure water tending to increase their vigour when once the pots are becoming filled with roots. Do not expose the plants to the full blaze of the sun, or the foliage will lose its deep green

colour and be liable to sear should it be caught in a wet condition. Towards autumn as soon as the fruits are three parts coloured removal to a cooler and more airy house is advisable.—C. N.

**Grubs in Cauliflowers.**—How often these are affected by a small white coloured maggot which clusters in colonies around the lower part of the stem and roots. This pest is often the cause of failure in batches of Cauliflower, which until three parts grown and about to heart in look splendid. I have often thought that, in addition to dressing land addicted to this enemy with gas-lime, burnt refuse and soot at digging time, it would be well when planting to mix a percentage of these ingredients with the soil round the roots, as all grubs and similar pests are certainly opposed to such a mixture. It is not a good plan to replant a plot directly Cauliflowers which have been affected with this maggot are cleared off. The better plan is to well dress it and allow it to remain uncropped six weeks, although of course when ground is scarce this cannot always be done.—J. C.

**Carrots.**—Where wireworm and grubs have made gaps in the main sowings of Carrots, it is not too late for sowing again, providing proper sorts are sown. Scarlet Model, Nantes Horn and Market Favourite will do well, being quick growers. Prepare the ground thoroughly by incorporating plenty of soot, wood ashes and burnt garden refuse, this being obnoxious to all insect pests and promoting a vigorous growth. It is also a good plan to sow small batches of some quick-maturing Carrot several times during the summer, these being most useful for drawing in quite a young state. Odd corners or nooks not large enough for any other crop may be used for them, as it is not large quantities that are needed, but a succession of young sweet roots.—J. C.

### THE ASPARAGUS KNIFE.

MR. KEMP shows on p. 362—and many of us have proved by thousands of examples in practice—that the knife is wholly unnecessary. True, a little tact and knowledge of the roots and shoots of Asparagus are needful to deftly twist them off at the right point without breaking the crisp shoot through at the wrong place; but this art is soon acquired, and we get a maximum of edible grass with a minimum of injury to the growing roots and succession shoots. The blind, blundering knife, even in skilful hands, can hardly escape serious injury to both, whilst the knife in ignorant hands has maimed and ruined tens of thousands of promising Asparagus beds.

No sort of knife is needed for gathering Asparagus shoots on or near the level; hence the abolition of the knife in Asparagus grounds will also deliver the plants from that living death and semi-burial to which so many of them are subjected. The depth of this crown burial varies from 6 inches to 2 feet. Last autumn afforded special facilities for observing on a large scale the autumnal or winter dressing of commercial Asparagus well known in our London markets. That dressing consisted of a soil covering over a foot deep to a mat of weeds that covered the surface. The beds were 3 feet wide, with alleys between, and there were two or three rows of plants on each bed. The soil was dug out of the alleys and heaped over the weeds, leaving thousands of roots wounded and bleeding in the process. And yet it was said on the spot that this dressing was the only manure these Asparagus beds had had for twenty years. If so, the vigour of the plants furnished marvellous proofs of their powers of endurance. Many of the crowns must have been 18 inches or more from the surface. This system of heavy soil dressings in the autumn and winter to be raked partly down in the early spring also largely prevails in other parts. Without further discussion as to its benefits or otherwise, I only remark here and now that it renders the abolition of the Asparagus knife almost impossible. For Asparagus differs from most other plants in this. Blanch most of these, the more crisp, sweet, and

tender they grow. Blanch or bury Asparagus, and it is tough, tasteless, and useless, unless as a handle to the depths blanched. This woody consistency of blanched shoots, as well as the obstruction of the over-happy soil, would render impossible Mr. Kemp's quick and easy method of gathering Asparagus on the flat. No doubt his recommendation, which I heartily endorse, will be gladly adopted by many, to the great improvement of their Asparagus through its dual deliverance from burial alive and the knife.

D. T. F.

**Autocrat Pea.**—This comparatively new Pea is, I think, destined to become a general favourite. One good point in its favour is the free, stout growth it makes on light warm soils. Many of the strong growers, while doing well enough on ground which contains plenty of moisture, soon give way at the bottom of the haulm on shallow soils during dry weather. I have sown Autocrat on an open border at the same time as the early varieties, and it grows well thus early, and following these closely, comes in most useful, being a fine Pea of delicious flavour and a profitable cropper. I have also sown it at the end of February or beginning of March with such well-known sorts as Stratagem, Stourbridge Marrow, Exhibition Marrowfat and others, and it can hold its own with them all. The produce from this sowing has enabled me to prove its great resisting powers. It is also useful for sowing in June along with No Plus Ultra for late use.—J. C.

**Veitch's Extra Early Foreign Cauliflower.**—On January 28 I sowed with other seeds a pinch of the above, and as soon as the plants had made their rough leaves, they were pricked into boxes and ultimately planted out on a south border without the slightest protection, with the exception of what the wall afforded. By June I could have cut nice little heads of snowy whiteness, but my supply of Late Queen Broccoli was not exhausted; therefore I was not anxious to begin cutting for a few days. In our case this year this Cauliflower will over-lap Late Queen Broccoli a fortnight. I have grown several varieties of early Cauliflowers, but none have proved so early and reliable as this. Veitch's Pearl sowed the same time is now very robust-looking, and will, I have no doubt, follow close after the above. I consider these the two best and most reliable early Cauliflowers grown, and with me they do away with the necessity of autumn sowing.—J. EASTER, *Nostall Priory Gardens.*

## BOOKS.

### A DICTIONARY OF HORTICULTURE.

HAVING but a few days ago had the opportunity of reading the *critique* by "W. M." in THE GARDEN on M. A. M. C. Jongkindt Coninek's work, "A Dictionary of the Principal Terms used in Botany and Horticulture," may I ask you to give me space to say a few words in reply?

As an old pupil of M. Coninek's, and one who has given him some little assistance with the "Dictionary" by revising the English part of it, it is natural that I should take some interest in endeavouring to bring out its merits before those who, like "W. M.," are unable to see the useful side, or the *raison d'être* of such a work. Doubtless, as "W. M." points out, it would be extremely useful to possess a polyglot dictionary of common gardening terms, such as "bell-glass," "layering," "mulching," &c., and I for one should hail such a work with satisfaction. But in compiling his dictionary M. Coninek has entertained an entirely different notion of the needs of the present-day horticultural world. He has perceived that a correct knowledge of the names of plants, together with the terms used in describing them and their immediate equivalents in the various languages, is of far more importance to the rising generation of plant growers than a compilation, however well planned, of such common

horticultural terms as "W. M." has named. Technical education of this kind will be proved in the long-run to be a *sine qua non* as well to the nurseryman as to the agriculturist, and by the publication of his dictionary M. Coninek is undoubtedly helping to spread broadcast this necessary element.

A dictionary of this kind, and not one such as "W. M." has proposed, well and proper as the latter would be in its place, supplies such information as will enable plant growers to correctly name their plants, to understand these names, and to give, when occasion requires, a true and definite description of the plants in the different languages.

In contemplating the evident practical usefulness of such knowledge, it seems to me high time that nurserymen and gardeners began to take a more intelligent interest in the individual characters and needs of the plants they cultivate, and these characters and needs are often revealed in the generic or the specific name of the plant.

As M. Crépin justly remarks in the preface to this little book, its value largely lies in the fact that it will save the continual fumbling through voluminous dictionaries. Moreover, contrary to what "W. M." has asserted, the equivalent English, French, German or Dutch translations of very many of the words, as I myself have often found by experience, are not to be discovered in ordinary Latin dictionaries, of however high a standard they may be, and it was usually only after searching through scattered botanical works that the proper terms were obtained.

M. Coninek's work is not a "Dictionary of Horticultural Terms," but a "Dictionary of the Principal Terms used in Botany and Horticulture," and its arrangement is such as to render easy an acquaintance with these terms in the various languages.

But I am not alone in my conception of the value of this work. Is the consensus of opinion of twenty-three of the leading horticultural papers in Europe to count for nothing? And how is it that the adverse criticism of "W. M." is the only one which has been forthcoming?

I am confident that it is the technical botanical knowledge which in the future will produce capable cultivators, and will tend to effect the interchange of sound and scientific ideas between the various nations of the horticultural world.

The *raison d'être*, then, of this work is sufficiently evident, and at some future time we will hope to see it revised and amplified, some of those terms which are less directly useful being omitted and others included in its pages.—W. C. W.

—In the latter half of his communication "W. C. W." fully admits all that I have advanced. Only a dozen or so of horticultural terms are given. Anyone who cares to trouble himself about the matter should get a copy of M. Coninek's dictionary and look through it, and then read what I said about it in THE GARDEN. I am quite content to abide by the judgment of any sensible man as to the justice of my remarks when he has done this.—W. M.

**The Horticulturist's Rule-Book.\***—A book that deals with the best methods of waging warfare against the many fungoid and insect pests that are ever present and ready to discount our best endeavours is bound to be of service. A vast amount of useful information as to pests and remedies lies scattered that it is most desirable to have collected in a handy form available for ready reference, and we have it in this manual which, originally compiled in 1889, has now reached its third edition, which is revised and up to date. The author remarks "that the contents have been gleaned from many sources," and such a mass of useful information is the result, that the book should become a standard work of reference essential alike to all who have to deal with plant life, whether for pleasure or profit. The first chapter deals with insecticides, and others follow on injurious insects, with remedies and preventives,

\* "The Horticulturist's Rule-Book." By L. H. Bailey. Macmillan and Co., London and New York.

plant diseases and remedies, injuries from rodents, lawns, weeds and moss, waxes for grafting, cements, mortars, paints and glues; with many more chapters containing seed planting and computation tables, rules and useful items of information, all tabulated alphabetically and indexed for ready reference. The price of the book, which is only 75 cents, happily places it within the means of all who may happen to need it.

## GARDEN FLORA.

### PLATE 1019.

#### THE GLADIOLUS-FLOWERED CANNAS.

(WITH A COLOURED PLATE.\*)

No class of plants grown for the sake of their flowers has come more prominently to the front than have these beautiful forms of the Indian Shot during the past two or three years. This dwarf race of Cannas with large trusses and proportionately large flowers originated in France, M. Crozy, of Lyons, being the introducer of these fine decorative flowering plants. One of the first varieties to be certificated in this country was Mme. Crozy, which received that award in 1890 when shown by Messrs. Paul and Son. The same firm during the following four years received for other varieties no less than nineteen additional certificates. This fact alone is sufficient to indicate the progress that has been made in this race, variation in colour both in selfs, margined and spotted kinds being particularly noteworthy. In its way, however, Mme. Crozy still holds its own; its bright crimson flowers edged with gold make it conspicuous, the petals being individually large and the habit dwarf and compact. Another and more recently introduced variety is Konigin Charlotte (W. Pfitzer), which must be deemed one of the very finest yet raised, having all the good qualities of the preceding with larger trusses and in greater profusion. It is of vigorous, yet very dwarf growth, the massive foliage adding to its beauty; its spikes are borne well above the leaves, the individual flowers being large, bright red in colour, with a broad golden or canary-yellow margin. This variety recently at the Temple show was shown in the finest condition by Messrs. H. Cannell and Sons, Messrs. H. Low and Co., and Messrs. Paul and Son. It may be so grown as to flower at almost any season of the year, but this is scarcely desirable. Another notable variety is Cheshunt Yellow, which was the first English raised Canna to receive a certificate of merit. It is a great advance in the pure yellows with compact spikes of bright clear yellow flowers, and, like the preceding, is also well suited to either pot culture or for bedding out. As an example of the spotted forms, Amiral Avellan should be noted; it has large clear yellow flowers, spotted profusely with red. Another beautiful spotted kind is found in Antoine Barton, in which the ground colour is also yellow, but with carmine spots. Of the self-coloured varieties note should be made of Alphonse Bouvier, deep crimson, very dwarf; Sophie Buchner, bright vermilion, a very fine variety, with handsome foliage as well; Primrose, clear lemon-yellow, very distinct and free; Baron M. de Hirsch, crimson-scarlet, with yellow border; Paul Bruant, rich violet-crimson; Emperor William 2nd, bright scarlet, an extra fine variety; and Tom Thumb, which bids fair to be the forerunner of an even dwarf

\* Drawn for THE GARDEN in Messrs. Cannell's nursery at Swanley by Agnes Cook. Lithographed and printed by Guillaume Severeys.



*Asplenium platyneuron* L.  
1. Spore. 2. Prothallium. 3. Young plant.





race, flowering freely when not more than 1 foot in height. The foregoing are a selection of one dozen of the best kinds typical of this new race; others could be added, for already, as in other instances, the new varieties are becoming very numerous, too much so in some respects when the variation is but slight. As regards

CULTURE,

we cannot do better than quote the advice given by Mr. George Paul in a paper read before the Horticultural Club in November, 1893, wherein he states:—

The outdoor culture of the Gladiolus-flowered Cannas is simple. Prepare the ground as for Dahlias, choose young growing plants, and plant, if on a lawn, in large beds about 3 feet apart, in rich soil; and, beyond some watering to establish the plants and a possible mulching if the weather be dry, nothing more is needed. The earlier they are planted out the better, as long as it is past the time of May frosts. They soon flower and keep on until they are either cut down like the Dahlia, when they may be either lifted and stored in a similar manner, or, better still, they can be utilised for winter flowering. . . . I think the secret of pot culture is alternating the periods of growth and rest. The constant potting of the plants into larger pots, say three times a year, is to be deprecated, as they become specimens too clumsy to handle; but if kept in the same pots they should be heavily and highly mulched. Soil: Sandy loam and rotted manure. They take much water, like most large-leaved plants, but need good drainage.

To these remarks it should be added that increase is readily effected by division of the rhizomes, each leader of which will make a plant. Seedlings also are easily raised, this process giving prospect of variety. To flower these Cannas early in the season, i.e., from March onwards to May, a gentle heat is necessary, with a fair amount of atmospheric moisture; light also is essential to preserve a dwarf growth. If it is deemed desirable to cut the spikes, it is well to state, for the benefit of those who have not noted it, that in so doing the secondary spike which emanates from the base of the first may thus be cut away, the plant being thus shorn of a part of its beauty.

H. G.

ORCHARD AND FRUIT GARDEN.

APPLE JUNEATING.

This early Apple is sometimes known by the names of Margaret and Early Red Margaret, and wherever grown it is greatly appreciated for its earliness, pretty colour and pleasant flavour for dessert. Old people whose teeth are not very good are especially fond of Juneating, as the flesh is soft, very juicy and just the sort of Apple they like. Soil and situation affect the shape of the fruit to some extent, as in some counties the fruit is very round (as in the illustration), while in some other parts it comes slightly angular. In two orchards here we have the fruit different in shape, though exactly similar in colour and taste, which proves that the soil does influence the form of the fruit. A landowner who desires to plant an orchard of Apple trees for his home supply should include Juneating in the selection of varieties, as it is one of the best and earliest dessert sorts that could be planted. Seasons naturally hasten or retard the ripening period. Twice within the past ten years I have gathered this variety at the end of the second week in July, and in cold, wet years the fruit has not been ready until a month later; but

even if the Apples are not ripe before the second week in August, there are so very few really good dessert Apples ready then that Juneating is valuable, affording a welcome change on the dessert table. Another excellent recommendation is the fertility of the trees, particularly those in standard form. This arises from several causes, the greatest being the early maturing of the fruit. Any kind of fruit tree that ripens its crop very early is relieved of its load some months before the fall of the leaf, which enables it to recover in a great measure from any exhaustion experienced in perfecting its fruit. I could mention several well-known kinds of fruit that are universally known for their heavy and continuous crops, all and each of which ripen their fruit early like the Juneating Apple. Again, the early removal of the crop throws the full energy of the tree into bud-formation, and unless climatic conditions are very bad indeed the fruit buds are so strong and well formed, that a good set is practically assured. Trees of Juneating are moderately strong growers, and standards will not become too crowded at 25 feet apart each way, as the soil must be of the most fertile character to promote a growth that would cause the trees to touch each other at such a distance. Another reason for their moderate growth is, as already stated, the prolific habit



Apple Juneating. From a photograph sent by Mr. J. Norman Blake, Bedford.

of the trees. I have only had experience with half-a-dozen bush trees of Juneating, but they have been equally as satisfactory in every respect as standards, while some cordons have not answered, the growth, foliage and fruit being decidedly poor in spite of extra care and attention to the roots. Possibly the latter trees have failed through being worked upon the French Paradise stock. W. G. C.

**Watering wall trees.**—Owing to the long drought, which has every appearance of continuing at present (June 11), wall trees are exhibiting signals of distress even where mulched. Not only does the foliage begin to look pale in colour, but the fruit is also assuming an unhealthy tint. In this part (Herefordshire) our rainfall is over 3 inches below the average for the year, or in other words, over 300 tons per acre short. In the open ground this is a serious deficit, but against walls it is more so. Not only do wall trees get generally less water when it rains, as the wall itself prevents it when the wind is in certain quarters, but the evaporation is greater than in the open ground, consequently they suffer more or less during a period of drought. If water is plentiful and labour can be spared to apply it, a thorough soaking to the roots will prove of intrinsic value to the trees, conferring a present and future benefit on them. Trees that lack moisture at the root can neither develop their fruit nor form good fruit-buds for another season, and the foliage is certain to be

attacked by insect foes. Already aphid in different forms is infesting Plum and Cherry trees. Red spider is becoming much in evidence on almost all wall trees that have suffered through lack of moisture—in fact, when once a tree gets into a weak state through any cause, insect enemies are sure to be particularly severe upon it.—W. G. C.

**Gooseberry Keepsake.**—The Gooseberry crop is not a very heavy one this year, but they are unusually large with us, even the smallest-berried varieties being larger now than is the case most years when ripe. The first to pick this season was Keepsake, which was a week earlier than its rival, Whinham's Industry. As I stated in THE GARDEN a year or so ago, Keepsake was and is probably now very extensively grown at Toddington, on Lord Sudeley's fruit farm, Mr. Wise, who so ably manages the estate, informing me that it was the best Gooseberry they grew. After some nine years' experience of it and other sorts, I must endorse the opinion of Mr. Wise, as the Keepsake, in addition to the good qualities already named, rapidly forms a large bush if planted on good soil and well treated afterwards. Again, most gardeners will have observed how some varieties of Gooseberries are always the first to be attacked by the caterpillar and red spider, which quickly spreads to other trees unless checked. Whenever these pests appear I have observed that Early Sulphur is the first to be infested, and Keepsake the last, an item of some importance with a Gooseberry that is marketed while green. Not only is the variety of value to the grower for sale, but equally so to the gardener who has to maintain a continuous supply of fruit for his employer's table. Most of us know how frequent the inquiries are, "When will the Gooseberries be ready?" some cooks putting this query almost as soon as the embryo berries are formed, thus proving how acceptable early fruit will be. As a change from Rhubarb or late Apples, Keepsake is an acquisition to the gardener in a private establishment, enabling him to pick berries early, or, what is sometimes of vital importance to him, as soon as they can be got anywhere.—W. G. C.

YOUNG STRAWBERRY PLANTS FOR EARLY FRUITING.

Those who require early Strawberries in the open would do well to plant young plants yearly for the purpose. So far I have found Noble by far the best, the fruits being very fine and quite ten days earlier than those from older plants. Noble planted on a warm border specially for the purpose will give a splendid return when Strawberries are none too plentiful during the first or second week in June. The land should be well cultivated by deep digging, with abundant manure, but even then these results must not be expected from weak, puny plants. I have for a few seasons adopted an easy plan to get strong young plants for the first crop in the open. I obtain my forcing runners from plants specially grown to produce them, and, wanting large numbers, have to purchase a few hundreds for planting in the open. As it is out of the question getting them strong or early enough to plant out then, the plants are potted when they arrive, placed under a north wall, and kept for early spring planting in March. Such plants are a little longer about, but it is a great gain to have strong plants with a mass of roots instead of weakly runners deficient of roots, a portion being lost in severe weather, and those left weak and not in condition to fruit the first season. Those who do not wish to pot up may plant them close together in rows and lift in the spring with a ball, but I favour pots, as then there is no cheek, and if carefully planted growth is rapid, and the plants by the following spring will be equal in size to three-year-old plants, but with more vigour, giving very fine fruits. If strong runners can be obtained in June or early in July, then fine fruits may be had in less than twelve months from time of planting. This is the best method, and in garlens where

the runners can be obtained very good results will follow. Though the crop will not be so large as from plants given a few more months, if the time the ground is occupied be taken into account, I would strongly advise this mode of culture. My reason for adopting the first named plan is potting up runners in August, or even September is more convenient, and runners when received from the trade grower have never many roots; a few hundred plants are soon potted up, and make fine material for spring planting. The plants are plunged in the soil over the rims of the pots in early winter, the flower-trusses removed when they show in the spring after planting out, and they are given ample space in the rows when planted. Noble is the very best Strawberry I have tried for the purpose named, as it is vigorous and free bearing, and though the quality may not be first-rate, I have never had any objection on that score, as early fruits are not expected to be equal to those ten days or a fortnight later. To get Strawberries early there must be vigour, only one fruiting season must be allowed, with the ground specially prepared. If time or circumstances do not permit of growing in the shorter period, the system advised is well worth a trial. In all cases the value of young plants is well known, much better results being secured, such plants often succeeding where older plants fail.

G. WYTHES.

**Pruning dwarf Apple trees.**—There are three ways of pruning dwarf Apple trees in vogue, and no doubt all have very good results generally, though none seem to show better average crops than do the dwarf trees at Chiswick, where the method of pruning does not consist of shortening the shoots or branches, but in keeping them well thinned out, so that the trees have a loose and, in some cases, almost drooping growth. It is rare that these trees do not carry a good crop. In some gardens dwarf trees have their branches thin, but hard-spurred, treated really as if cordons; in others the trees are repressed, by having the branches as well as the shoots shortened, so that in time they become stiff stocky bushes. It would be very interesting, had we gardens at our disposal, to test the relative values of all three systems on the same sorts of Apples side by side.—A. D.

**Cardinal, Early Rivers and Lord Napier Nectarines.**—Whilst most ready to admit that Early Rivers is a splendid early Nectarine, I confess not liking to see it exalted at the expense of Lord Napier, quite one of the best in cultivation. At the Temple show, apart from the fine collection of pot trees of Cardinal and Early Rivers shown by Mr. Rivers, and in another tent, was a small pot tree of Lord Napier having a few half-grown green fruits on it. By its side were dishes of the new Cardinal, and beside also a card, stating that this tree of Lord Napier had been subjected to just the same treatment as the trees which bore the ripe Cardinal fruits. The natural inference was that Cardinal identically treated was fully four weeks earlier than Lord Napier. Then it was not evident that Cardinal in the group was any earlier than Early Rivers—indeed, I do not learn that it is held to be earlier. Somewhat sceptical as to this immense difference between these two sorts and Lord Napier, and seeing close by some fine fruits of the Early Rivers and Lord Napier from that first-class fruit grower, Mr. McIndoe; thinking, too, it was very likely that these came from the same house, I ventured to write to him and ask the conditions under which these fruits were grown. I have from him a most courteous reply, in which he states that the two varieties were gathered from trees grown in a 70-foot lean-to house at Hutton Hall, side by side in the middle, and, of course, getting exactly the same heat. The house was started December 1; the first fruit of Early Rivers was gathered on May 11 and the first from Lord Napier on May 16, or only a difference of five days. This period corresponded exactly with what was found in ripening last year. It is but right, in the face of what was shown at the Temple, this impartial testimony as to the

relative earliness of these two fine Nectarines and the new Cardinal should be made known, as also Mr. McIndoe's testimony that there can be no doubt about Early Rivers being a splendid addition to the many fine varieties raised at Sawbridge-worth. The moral of this information is that with Early Rivers first, Lord Napier directly follows in succession.—A. D.

**Spraying trees, &c.**—One of the things we are continually preaching is the importance of checking the depredations of insects and fungi by the aid of antidotes sprayed over trees and crops. The preaching is tacitly admitted to be the thing, but is rarely acted upon. If we are to credit all we hear from the American orchards, it would seem as if the special function of the fruit grower across the Atlantic was one long contest, through the aid of spraying, with insect life. Here there is often ample need for the warfare, and yet it is little waged. Already do we hear in various directions complaints of the prevalence of caterpillars on Apple trees, and very much so on forest trees, and especially on Gooseberry bushes. Still there is so much of comparative helplessness or indifference because the use of undoubted antidotes seems to be rare. In America we learn that spraying of fruit trees with powerful insecticides has been rendered scientifically exact. Here a sprayer of any sort seems to be rarely used. Even with Gooseberry bushes it seems to be regarded as less an evil to see every leaf eaten up than to dress them once or twice with Hellebore powder. Even when the Potato fungus is rampant very few indeed trouble to give sulphate of copper and lime dressings to the foliage, although it is notorious that this compound is a wonderful antidote to the disease. This sort of negligence should not be found in large gardens, and especially in market gardens. In rural districts, where gardens are small and appliances are difficult to obtain, it seems desirable that local authorities should provide not only appliances, but also duly qualified persons to utilise them at moderate charges. The long-continued drought which at present is obnoxious to fungoid attacks seems to be breeding insect life wholesale.—A. D.

#### MUTILATING FRUIT TREES.

In some gardens, or some employers seem to think, a tidy appearance of paramount importance, but this may easily be overdone. By all means keep weeds under and also remove anything of a rubbishy character, but do not extend the craze for neatness to the fruit trees. It must not be thought that I would let these take their chance or grow wildly. They must be attended to in due course, though not to the extent of making all as trim as possible. Wall trees ought certainly to be summer-pruned and have all their leading shoots laid in straightly, otherwise they will become crooked to the extent of breaking when the attempt is made to straighten them next winter. Quite recently I visited an enclosed garden the walls of which were well furnished with fruit trees. Evidently enough these had been properly treated in the past and capital crops of fruit were set on most of the trees. This season a change of gardeners has been made, and the owner of the place thought the opportunity a good one for carrying out his own ideas as to how these trees should be summer-pruned. All the lateral growths on all the Plums, Apricots and Pears have been as closely shortened back as they ought really to have been next winter, and in the cases of the two first named there appears to be more fruit hanging than there are leaves on the trees. Such an wholesale removal of growth must have had a most injurious effect upon the trees. Nothing short of a very severe thinning out of the fruit will prevent the rest from being of second-rate quality; whereas had the stopping been properly done there would have been grand crops of fruit. Pruning to the second small leaf, or even to the first full-sized leaf, would inevitably cause the whole of the buds at the axils of these few leaves to push into growth this summer, and, in

fact, they were already doing so when I saw them. The bad effects, therefore, of this severe pruning will be apparent for the next two or three years, so many leafy growths forming where there ought to have been fruit spurs or buds. Lateral growths on sweet Cherries, Plums, Apricots and Pears may now be stopped at the fifth leaf, and any subsequent breaks from these be pinched back to the first leaf, this having the effect of diverting the sap to quarters where it is most needed and to plump up the back buds or those that it is desirous should develop into fruiting spurs or buds. Trees thus treated will not present an untidy appearance, especially if the leading growths are neatly fastened back to the walls, wires, or trellises, as the case may be. None but amateurs need be told that Peaches and Morello Cherries are most freely produced by well ripened wood of the previous year's growth, and the aim, therefore, should be to lay in a sprinkling of well-placed shoots all over the trees. Avoid over-doing this, as it is of importance that plenty of sunshine or daylight reach not merely the wood, but also the fruit, neither maturing properly if smothered up by leaves. Bush and pyramid fruit on dwarfing stocks grown in the open are in many instances very closely summer-pruned, and when this treatment is accompanied by annual or biennial winter lifting and root pruning there are usually plenty of fruit-buds every season. Those, however, who prefer to have larger, more naturally grown trees and heavier crops of fruit should not be too particular as to a neat appearance just now, and ought especially to avoid the form of mutilation alluded to at the commencement of these notes. It cannot be too often pointed out that the harder a naturally vigorous tree is pruned the more it will grow and the less likely will it be to crop freely. Root-pruning carried out piecemeal, one half being done one autumn and the other half a year later, will usually prove a good correction of grossness and unproductiveness, but we cannot be always root-pruning, and the very simple plan of leaving a good sprinkling of unpruned wood all over a vigorous tree will be nearly or quite as certain to have the effect of making a hitherto unproductive tree profitable enough. The first step towards this desirable end should be taken now or during the next month. Where the trees are at all crowded, thin out the young shoots freely, treating them much as advised in the case of laterals on wall trees, but many of the best placed growths should be left intact with a view to also leaving them unpruned next winter. This thinning out or shortening of much of the lateral growth on bush and pyramid trees will favour the ripening of the fruit, and the wood will also be better matured than would have been the case had no pruning been done. Treat espalier-trained trees and cordons similarly to wall trees, avoiding very close pruning.

W. I.

#### NATURE VERSUS ART.

ALTHOUGH stiffness and formality have of late years in a great measure disappeared from the flower garden, thanks chiefly to the persistent preaching of the apostles of Nature *v.* Art, one is often discouraged by chancing upon gardens, some of them large, some but a yard or two in extent, upon which evident and loving labour has been expended, with a result that makes the heart of the lover of Nature sick within him. Who does not know the flint or clinker erections, fashioned with infinite, but fiendish ingenuity, of some railway or coastguard stations? Once, indeed, at one of the former I saw a spar and clinker locomotive that must have taken months to complete. These receptacles generally contain a few Wall-flowers, Antirrhinums, or Marigolds, flowers that with their natural setting of brown or red earth or grass verge have a simple charm that they are effectually bereft of by their blatant caskets. To such gardeners, however, a sense of delicacy makes it difficult to speak one's thoughts. I always find when it comes to the point that I am

too much of a coward to condemn to the proprietor what to him is evidently such a source of pride, and end by leaving him to worship the goddess Flora after the manner of his mistaken sect, which, alas! is not to be met with only in the small plot of the working man, for in many a large garden the time-honoured motto *ars est celare artem* is glaringly ignored.

I have in my mind a public garden which might be very beautiful; even with all the sins of commission that have been perpetrated within its borders it is still beautiful. The first impression forced upon the stranger on entering is that the gardener's chief aim is to impress upon the public's notice the grandmotherly care that he takes of his charges. Nothing is allowed to grow 6 inches high without a stick and a tie. Torture at the stake is apparent on every side. During the last summer bushy Fuchsias were planted in quantity and their shoots tied to yellow Bamboo canes, some of the specimens being fixed up with as many as twenty; in fact, the poor plants seemed always of secondary importance to the conspicuous sticks that spread them out so stiltily. A bed of giant Sunflowers had inch-square stakes over 6 feet in length driven into the ground beside each plant before the latter were 2 feet above the soil; consequently, until the flowers were produced and growth completed, the stakes were the chief feature of the plot, and some of the plants not growing over 4 feet high never attained to more than two-thirds of the height of their respective supports. The most striking error, however, in the matter of staking in this garden occurred in the case of a flowering Aloe (*Agave americana*). I noticed the flower-spike just as it protruded from the huge serrated leaves: so evidently had the ever-watchful staker, for a deep excavation was being commenced at a distance of about 3 feet, and on the next occasion of my passing a gigantic mast about 20 feet in height, like an emerald-green scaffolding pole, towered over the abashed succulent. As the spike, far slenderer than its bulky wooden companion, grew it was securely fastened at intervals to the pole, which was eventually shortened to about 12 feet, the height of the Aloe's flower-spike. Now if support had been necessary in this case, it could have been easily given in a way that would have been almost unnoticeable; but as bad gales do not occur during the English summer, and as the Aloe's candelabra wavered in their thousands many a bitter gale in their native habitats without being levelled to the ground, the inference is that the disfigurement was entirely gratuitous. It spoilt the quaint effect of the Aloe's inflorescence and was merely a monument of misjudgment.

On the largest piece of turf in the garden of which I write the name of the town is cut out in letter beds, which are planted with *Pyrethrum aureum*. It is difficult to believe that any educated person could find subject for commendation in the atrocities I have described, yet so depraved, or rather I should say so unenlightened, are the tastes of many, that a section of the public is prouder of all this misdirected zeal than of the many beautiful objects and effects that the garden still affords. S. W. F.

**A Brier hedge.**—Between the flower garden a hedge of Briers extends that is now an object of exceeding beauty. By the gate are two large bushes of Sweet Brier, which on damp evenings distil their fragrance lavishly. Then come the Austrian Yellow and Copper, Harrisoni and the Persian Yellow, while the hedge ends with a large bush of the white Scotch Brier. All of these Briers, with the exception of the first named, are now in flower. The effect of long sprays of the Copper and Yellow Austrians, studded with resplendent orange-scarlet and bright gold single flowers, hanging down to the ground, while the top of the hedge is crowned with the double blooms of Harrisoni and Persian Yellow, is better imagined than described. In the brilliant sunlight of the past week the spectacle has been simply gorgeous, and few that have witnessed it but have been

struck by the vivid colouring. The ground where the Briers are planted is poor and shallow, but being left to themselves and untouched by the pruning-knife, they have formed a very fair hedge, as well as at this period of the year a very entrancing picture.—S. W. F.

## THE WEEK'S WORK.

### HARDY FRUITS.

**STRAWBERRIES.**—Those who mulched early will this season be well rewarded by the size of fruit on light soils, the mulch having greatly assisted in swelling up the fruits. At the time these notes are penned we have not had any rain to benefit the roots of these plants, and the watering recommended previously will have done much good. In watering saturate the plants say once a week in preference to dribbles, my plan being to give each root well furnished with fruit from two to three gallons. The mulch, being given as it comes from the stables, requires a certain amount of rain to cleanse and bleach the long litter, so that the watering will cleanse as well as give nourishment if applied freely. Feeding the mid-season and later plants well will repay, especially if clear water can be given afterwards, but do not pour liquid manure or fertilisers of any kind over the fruit. In all cases when liquid manures are given it should be at the root, and in the evening or in chilly weather.

**PROTECTING THE FRUIT, &c.**—This will claim first attention, especially in old gardens, as the larger birds are most troublesome. It is not enough to merely lay a single net over the plants, as the birds settle on the nets and disfigure most of the large fruits; a few supports in the way of pea stakes or pegs will prevent injury. Those who have large breadths where netting is out of the question often employ boys to scare the birds, but it is necessary to do this early in the day, quite by sunrise. To preserve the fruits from the soil I do not think there is anything to equal clean straw. Short Grass from the mowing machine is at times used, but it is not nice in wet weather; it adheres to the fruit, becomes mouldy, and does more harm than good. Tan after the heat is spent and in a clean state is superior; it also retains the moisture in dry seasons, and is a splendid preventive of slugs in wet seasons, an important point, as slugs do much damage. Of late years various contrivances have been introduced. Wire guards answer well for large plants in wet seasons, as the fruits, being raised, get more light and air, and with only small quantities of fruit, tiles, slates, or other flat surfaces are well adapted for placing under large clusters. Previous to netting or protecting of any kind, watering should be done and the surface between the rows made clean. Late kinds, such as British Queen, Lord Sufield, Latest of All, Oxonian, and others well repay for a little extra attention, as they come in when the glut is past, and I fear this season will be a very short one owing to drought and heat. It is well to mulch these more liberally, using shorter material and water well to settle and cleanse the mulch. If necessary to get large, late fruits, thin the trusses of the heavier kinds, as Latest of All and Oxonian bear very freely. Those who have north borders for their late crops will be better supplied, as they are cooler in such seasons, and the advantage of growing young plants is, they are better able to stand seasons of drought.

**LAYERING YOUNG PLANTS.**—The season is at hand for layering, and I have always found the earlier young plants can be obtained and got into the fruiting pots or growing quarters the better; and for early runners it is advisable to have a special plantation of plants not allowed to fruit. There are various means adopted to root the plants. Good results are obtained by layering direct into the fruiting pots, using 5-inch pots for early forcing; others layer into 3-inch pots and pot on when rooted—an excellent plan—as there is no water-logging in wet seasons and firm potting

—a great necessity—can be ensured. The old method of layering into pieces of cut turf has several advantages and is admirably adapted for planting, the roots so soon go into the new turf and are planted very quickly with less trouble. The turves should be plunged in the space between the plants and well watered. To get large quantities of rooted runners from young plants just cleared of their fruits it is a good plan to place some rich soil between every alternate row of plants and peg the runners into it. These make good strong fruiting plants for next season, and if the runners are layered as advised, by leaving every other row there is room to water and work between the plants; but it is necessary to make the runners firm to obtain strong roots.

**YOUNG STRAWBERRY BEDS.**—The value of yearling plants is now so well known it is almost useless to point out their superiority over older ones. A few varieties may be excepted, but they are very limited. Those who require very early fruits of the best quality would do well to rely upon young plants raised at this season for planting early in July, and such plants in favourable seasons will give a heavy crop in eleven months from time of planting. For early fruits I have found none to equal Noble, on a sloping south or south-west border the fruits are very early and fine. Royal Sovereign is equally early, of superior flavour, and doubtless when more plentiful will supersede Noble, but the latter in poor soils will thrive where others fail. Latest of All is very fine grown on young plants for late use. Ground just cleared of green crops such as Cabbage may be prepared for the young plants, digging deeply, giving plenty of manure, and by doing the work now it will be ready to plant when the runners are rooted.

**RASPBERRIES.**—These were much injured last winter, especially some of the weaker growers, but the newer varieties, like Superlative, are more hardy. It is best to reduce the shoots of these weak growers, so as to get as strong fruiting canes as possible for next season, three to five at a stool being ample. Suckers are more numerous than usual this season, owing to there being less top growth to support, and there should be no time lost in getting rid of the great majority of these. The strong growers require more room, as if crowded the fruits are small. The rows between the plants should be hoed, and the useless sucker growths at the stools pulled out by hand. Raspberries require both food and moisture on light soils, and few crops pay better for liberal supplies of liquid manure; the plants being surface rooters, they will take large supplies. The autumn-planted roots in many cases did not survive the severe winter, but those which are pushing up new growths from the base should get every encouragement by mulching, keeping the ground clean and restriction to the strongest growths, three or even one being ample to get good canes. Autumn fruiters cut down hard to produce new growths or fruiting wood should also be thinned to get fine fruits, giving food as advised; they will then fruit well into October and in quantity, bearing all up the growths if these are given plenty of room to develop.

**GOOSEBERRIES.**—In many gardens the caterpillar at this season plays havoc with the leaves, and it is impossible to arrest the destruction if not taken in hand vigorously, the difficulty being if any insecticide is used which adheres to the fruit it is not pleasant to use the fruit afterwards, and when fully ripe they cannot well be cleansed. I have found nothing to equal hellebore powder dusted on the trees when damp and the soil under the trees coated with fresh lime. Syringing with quassia extract is also excellent in dry seasons, using hellebore in damp weather. Change of quarters will also do much good, lifting in autumn with a ball and giving plenty of good soil and manures. The Gooseberry also suffers in dry seasons from red spider. A mulch of manure will do much good and prevent spider getting ahead, as the mulch retains moisture and assists in keeping the surface roots cool. Syringing with water and sulphur mixed will kill the pests,

and the sulphur is readily washed from the berries.

CURRENTS are bearing freely, and may with advantage be lightened of any useless wood, such as crowded lateral growth: this may be spurred back to within four joints or leaves from the base, which will give the leading shoots more room and the fruits will colour better. Bush fruit trees derive great benefit by removal of useless shoots. Sucker growth should never be allowed, and young trees for planting later should be kept in shape by pruning occasionally, keeping them to one leg or stem, as the crop is more readily gathered.

G. WYTHES.

### KITCHEN GARDEN.

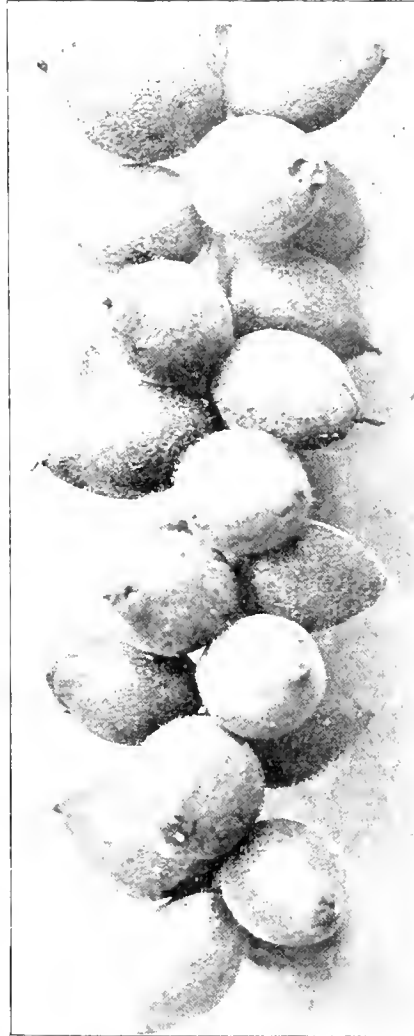
**CARDOONS.**—The main batch, if sown some time ago, will now be ready for planting into the trenches—that is to say, if hardening off has been attended to. Cardoons require a wider trench than Celery and quite as rich a root-run. Give plenty of room between each plant—2½ feet is a good distance where ground is plentiful; where scarce, 2 feet will do. Cardoons must never be allowed to feel the want of water, a weekly soaking if the weather is dry not being any too much. When once in vigorous growth liquid manure may be given once in three weeks. If plenty of space is allowed between the trenches—say 5 or 6 feet—sufficient soil will then be had for earthing, and the ridges may now be used for growing Lettuce and other quick-maturing crops. The best way is not to earth up the plants until fully grown, when hay-bands should be closely wound round the stems to keep them together and to prevent the soil from getting into the centres. In severe weather they must be lifted and protected; they then form a useful and generally much appreciated dish. Those who have not yet sown may do so in heat in small pots and finally plant the seedlings into trenches in a sunny, open position. Small useful plants may then be secured by November. The Large Spanish and Paris Market are the best varieties for general use.

**LATE CELERY.**—Those who grow Celery for a late supply must now attend to the young plants. As soon as they will bear handling prick them out in some sheltered nook in rich soil placed on a hard ash bottom, the same being surrounded with bricks turned on edge. A few Yew or Laurel boughs placed here and there will answer a double purpose—shading from hot sun and also from parching winds until well established. Where very late Celery can be accommodated it often proves more serviceable than the main crop, especially should the season turn out wet and rot set in. The late, being smaller, is likewise harder and more rot-proof. Standard Bearer and Leicester Red are two capital sorts for late work and of good quality.

**SOWING LATE PEAS.**—It is quite time now in the majority of gardens to sow Peas for the latest supply—that is, during September and October. A good sunny, open position should, if possible, be given, as mildew often affects these late lots. Ne Plus Ultra, British Queen, Walker's Perpetual Bearer, and Sturdy are all good for the purpose, and will form a succession if sown in equal quantities. Plenty of room between the rows is imperative, as, unless abundance of light and sun is admitted, the chances are that failure of the crop will ensue. Thick sowings are also ruinous, encouraging mildew and other troubles. When well up give a heavy mulch of good manure and plenty of water, as these late, tall-growing, robust sorts soon rob the soil of its moisture. Sometimes good pickings may be obtained from sowings made towards the end of the month of such early sorts as Chelsea Gem and Selected Early.

**PLANTING WINTER STUFF.**—Now that genial rains have fallen, no time should be lost in getting out more rows of successional winter vegetables. We have this week put out Veitch's Model and Cooling's Matchless Broccoli, the former unsurpassed for late spring use; the latter, a valuable hardy variety, coming into use in March and April. I do not approve of planting these sub-

jects between rows of Potatoes, unless the latter are extra wide apart, as the haulm invariably smothered and spoils the Broccoli, and even if they survive they are leggy and weak, and quite unfitted to stand a severe winter. Amongst short-topped, earlier Potatoes, however, that can be bent over so as to admit air and light to the plants, both Broccoli and Kale may be planted. Get out also both the tall and dwarf forms of Scotch Kales, also Asparagus and Cottager's Kale, the former about the most useful of all greens, it being so extremely hardy and such a continuous grower, the flavour also approaching that of Asparagus, as its name implies. Savoys also, more Walcheren Cauliflower and Cabbages to heart in in autumn, may be planted where ground is available. Late Brussels Sprouts which were



*Juglans Sieboldi.* From a photograph sent by Mr. L. Burbank, Santa Rosa, California.

pricked out into beds some time ago may now be got out into their permanent quarters. Where such very late Broccoli as Late Queen and Methven's June are grown, the sooner the plants are put out the better, giving them firm ground from which some fairly impoverishing crop has been cleared. Cauliflowers now turning in should be gone over daily and some leaves bent down over any forward heads to retard them, the sun and light soon discolouring them at this season. Cauliflowers may be kept for ten days or so if wanted for exhibition by lifting the plants with as much soil as possible and placing them in a tub of water in a cool cellar or fruit room, the water just covering the balls.

**SALADING.**—At this advanced date more care is requisite in providing a regular supply of green crisp subjects for the salad bowl. Position is a great point, and for Mustard and Cress, Radishes, and Lettuces a cool east or even a north border answers best. It is a capital plan to cover the seed beds lightly with some litter or garden mats until the seed has germinated. Perhaps the best method of growing Lettuces from now till the autumn is by sowing in drills and thinning out the seedlings to the proper distances. This saves labour, enables the plants to arrive more quickly at maturity, and lessens the liability to run to seed. A good Lettuce for sowing now is Veitch's Perfect Gem, it being of excellent quality, and Corn Salad or Lamb's Lettuce is not so generally grown as it deserves to be. During November and also in the spring months when good Lettuce and Endive are sometimes not over plentiful, Corn Salad comes in most useful and makes a desirable change. Seed sown now will produce plants for use in November, and a sowing a month hence is best for the spring supply. Drills are best on good rich, deep soil, allowing plenty of room both between the rows and the individual plants. Corn Salad needs a little protection in severe weather, dry litter of the common Bracken answers the purpose well.

**HERB BEDS.**—These should now be thoroughly cleansed from weeds and well watered if necessary, or many blanks will occur amongst the more tender transplanted sorts. Where these were sown in the open beds, thinning out must not be neglected, as Salsafy, Marjoram, and similar subjects soon turn yellow and decline if left too thick. Thyme and Sage planted this season will be much benefited by a good mulch of old Mushroom manure or even rough leaf-mould.

J. CRAWFORD.

### TREES AND SHRUBS.

#### JUGLANS SIEBOLDI.

THE remarkable Walnut, whose curious raceme of Nuts is shown in the accompanying illustration, is the chief representative of the genus *Juglans* in Japan. It is abundant in the northern island of Yezo and is also found in the more southern divisions of the empire, but is there confined to mountain districts. There are not, so far as I am aware, any trees of fruiting size in this country, although several young ones are in the arboretum nursery at Kew. According to Professor Sargent, however, it ripens fruit not only in such favoured States as California, but also in much colder districts where even the common Walnut (*J. regia*) will not succeed. On the plants at Kew the pinnate leaves consist of from seven to eleven leaflets, these being slightly pubescent on both surfaces and having shallow, irregular teeth on the margins. Professor Sargent, describing it as seen in a wild state in Japan, says it is a wide-branched tree rarely exceeding 50 feet in height, with pale, furrowed bark. The Nuts, whose characteristic arrangement is well shown in the picture, are about 1½ inches long, with a diameter one-third less, the kernel resembling that of the common Walnut in flavour. Of its possible value in Great Britain little can be said as yet, except that it is perfectly hardy. It is said to be inferior to the Black Walnut (*J. nigra*) as an ornamental tree, and the climate of even the more northerly portions of the United States is so much better suited to the deciduous trees and shrubs of Japan, that its fruiting there can only be taken as evidence of the probability of a similar success here. According to Dippel, this tree is the same as those known in gardens as *J. macrophylla* and *J. ailanthifolia*.

The only other *Juglans* found in Japan in a truly wild state is *J. cordiformis*. It is in cultivation at Kew, and somewhat resembles *J. Sieboldi* in foliage. At present the former is distinguished by the more numerous and somewhat smaller leaflets and by a more marked pubescence on the leaf surfaces than occurs on those of Siebold's Walnut. The Nuts are flattened, long-pointed and more or less heart-shaped.

W. J. B.

#### CEDARS OF LEBANON AT HOME.

A LONG-FEELT wish to see this noble tree on its native hills has at last been gratified, and our impressions may have some interest for the many who admire this tree. It may be as well at once to clear the ground by saying that the division of this Cedar into two species is not one that should stand, as if there is any difference worth noting it is that of a mere variety only. Nor does it inhabit Lebanon only; that is but one station, and, we believe, a small one. There are more important habitats in Asia Minor, where this tree is widely distributed, and there are forests of it in Algeria, a visit to one of which we are now concerned with.

It is a pretty long tramp on foot or mule from any tolerably decent resting-place to Mount Babor, but once there the lover of the Cedar is at once impressed by the many aspects in life and death of the tree—the *death note* being, unhappily, too impressive, owing to the work of Arabs, fires, lightning, browsing animals, and other enemies. In some parts, indeed, with white barkless, dead trees, the mountain looked a tree cemetery. Clearly for ages it has been no one's business to look after the forest, and though it is not near any place of importance where the wood would be of much use, savage destruction has been the rule for many years. In Bruce or some other traveller we read of Africans who had a horrible way of taking a steak out of a living animal; and in this mountain the natives take the plank out of the living tree. Over much of the forest almost all the fine trees had been treated in this way by men who, not caring to cut the whole tree, cut into its side, and, taking out large planks, leave it to get on as best it may. These planks are dressed on the spot, a fine heap of chips remaining about, which anyone wanting a fire lights, and as likely as not burns part of the great stem. Small wonder if in the face of such doings many of the burnt trees are dead. No tree escapes disfigurement. Young and graceful trees that might soon take the place of the dead are broken off for sticks, and the second or third growths are treated in the same way. Continued mutilation of this kind of course leads to deformities, so that it is perhaps not fair to assume that the tree is here anywhere in a natural state as to its form, but the result is often beautiful nevertheless.

From a picturesque point of view no tree effects we have ever seen were better, and it would be impossible to give any idea of the variety of form seen in every degree of size, beginning with scrubby trees on the shaly sides of the mountain. It is probable that

the cutting of the points of the young trees repeatedly may have led to the wondrous variety of form we saw, but in any case it was very beautiful. Many of the smaller and medium-sized trees were not of one stem, as we expect to see in a Cedar, but many-stemmed and broken even as one rarely sees a Yew, the main branches of others leaning to the ground in infinite variety of contortion, the whole of the trees on the exposed sea-side being shorn by the north-east wind. The trees on the flank of the mountain are handier for the natives to get at and were probably oftener cut. In any case it is only on the top and upper slopes of the mountain that the stately Cedar is seen, sometimes very large and fine in form with great stems, though even among these big trees there is more variety of form than might be expected.

The best trees were on a sharp slope not so easy to swing an axe on, and protected by the crest of the mountain from the sea winds, and these trees were very beautiful and large, their plummy crests lovely when seen from ground above them. The boles of the trees were as large, some larger than the oldest and finest trees we have seen in England, but not so high as some. On the side most exposed to sea winds many trees grew on sharp slopes of broken shale without any visible trace of soil, though these were not, naturally, among the finest trees.

This may well suggest to planters that it would be well to be not so very particular about planting this tree on the best ground, and best prepared only, as is so often done with us. For the sake of variety, if for no other reason, it would be as well to try groups on such soil as the Scotch Fir thrives in. But there is more reason than that of variety for the plan, as it is pretty certain that very rich soils lead to quick and sappy growth and to a shorter life of the tree. All lovers of the tree who have the pleasure of planting it should try it in other ways than the isolated way usual in pleasure grounds, where the tree has to meet all the winds without any aid from neighbours while overlaid with heavy tree-like branches, which catch the snow in quantities enough to break them down. We do not say trees of this form are not beautiful, but they are but one form of the beauty this tree may give: it should often be planted in groups, and also closer among ordinary trees, where a noble Evergreen for game or other reasons is desired; with other vigorous forest trees it grows erect, with a taller bole. We mean here that it should be planted and grow up with young forest trees.

The glamour of the name of this tree leads to its price being kept up pretty high, which does not matter so much if we only plant one now and then, but in planting in quantity it is a more serious matter, and as there is abundance of good seed in the natural woods of Cedar both in N. Africa and Asia Minor, it ought to be obtainable almost as easily as any hardy Pine. And we think it better worth growing in our woods than some of

the Pines we plant of doubtful value, as the Spruce in many parts of the south of England—the Spruce being such a poor timber too. The trees of the Cedar we saw cut into the heart by the natives were in all cases clean and sound to the core, the wood pretty in colour and yielding a grateful odour. We cannot judge the value of Cedar wood from its growth in our country, where in over-rich soil the growth is often too rapid for good, lasting timber; but it is of higher value than that of Scotch Spruce or Silver as we grow them. There are the remains of a log in the Museum at Carthage said to be about 2000 years old, so there may be available evidence of the value of the native-grown Cedar of Lebanon. Then, again, every year Conifers are planted that have not the hardness of the Cedar of Lebanon on its cold mountain crests, where the snow is often yards deep in winter, and where it lay deep in many places on the day we saw the trees—May 3. These conditions are not so diverse from those of our own country as those of the climate of California, from whence many popular Conifers come. On the mountain, too, we saw some of our native wild flowers among those of the mountains of Algeria; but more striking still is that among the Cedars are many trees of our English Yew, healthy, but mutilated even more than the young Cedars, every branch being cut back repeatedly to supply probably some parts of the wooden ploughs or tool-handles. On lower mountains in the region near our common Hawthorn was in fresh bloom on the same day. But besides these facts we have the evidence of the old trees in many of our country seats; in some—as at Goodwood and Pains Hill—where the trees are more than usually effective from their number as well as size and stature. So we think it is time the Cedar was no longer valued as a pleasure-ground tree only, and that it should be freely grown here and there in our woods in groups, and also occasionally as a wood by itself.

As to the destruction of the trees on Mount Babor, it may be hoped it will not always be a discredit to the forest department of Algeria, and it should not be a great difficulty to exclude browsing animals and the ruthless destroyers of the fine trees, though it is an outlying situation. The interest of the tree is great, and the mountain commands a vast sea of broken landscape reaching into infinite distance in every direction, so that even if the timber has little value commercially, this home of the Cedar well deserves the care of the State.—*Field*.

***Acanthopanax ricin folium*.**—In many catalogues this is found under the name of *Aralia Maximowiczii*, but its true place is in the genus *Acanthopanax*, of which about half a dozen species are found in China and Japan. It is, according to Dr. Sargent, the largest araliaceous plant of Japan, for the tree will sometimes attain a height of 80 feet, with a tall, straight trunk 4 feet or 5 feet in diameter, covered with very thick, dark, deeply furrowed bark, and immense limbs that stand out from the trunk at right angles like those of an old pasture Oak. In this country it is, however, of comparatively recent introduction,

but, from the vigorous style of growth, it bids fair to soon attain a considerable size. As a young plant is has a decidedly sub-tropical aspect, the sturdy stem being as straight as a gun barrel, and freely furnished with large spines on the upper portion. The leaves, which are borne on very long, deep-coloured stalks, are palmate, five to seven-lobed, and of a dark shining green on the upper surface, but lighter beneath. It is perfectly hardy, for though in the winter it has a decided dead-stick appearance, on the return of spring the new foliage pushes forth in all its beauty. It succeeds best in a rather deep soil that is not parched up at any time. A bed planted with young, vigorous specimens at a sufficient distance apart, to allow for the full development of the handsome leaves, will form a very striking feature, quite equal to that presented by many sub-tropical subjects that need a hothouse during the greater part of the year.—T.

**Pernettyas.**—In some districts these have suffered a good deal from the late severe winter, but where they have escaped they are as usual flowering freely. Much as we have heard of the ornamental features of the different *Pernettyas* owing to the beauty of their berries during the winter months, a few words of praise may be spared them as flowering shrubs, for the pure white wax-like blossoms are borne in great profusion and present a very pretty appearance, nestling, as they do, among the small dark green leaves. Being of a stout texture, these flowers remain fresh a considerable time, and they are decidedly useful in a cut state. Though by carrying out a process of selection great changes have been effected in the berries, the flowers of all remain just about the same.—T.

**Dimorphanthus mandshuricus.**—This name is generally applied to what is apparently but a form of the North American *Aralia spinosa*, but in any case a vigorous specimen is highly ornamental by reason of its huge compound leaves and from its blossoms, which are borne towards the end of the summer or early in the autumn. It forms a stout, erect stem, the younger portion of which is furnished with numerous spines. The stem will reach a height of 10 feet to 12 feet or more, and at the flowering season is terminated by a large branching panicle of whitish blossoms. It is a plant that pushes up shoots from the base in considerable numbers, so that an established specimen makes a large mass or clump, consisting of numerous stems, which, being each clothed with the very large compound leaves during the summer, cover a considerable space, and as autumn approaches and the stoutest shoots bear aloft their large panicles of blossoms, it is then a very striking feature. It is thoroughly hardy and easily increased by root cuttings, as if a specimen is transplanted and some of the roots are allowed to remain in the soil, young plants will often crop up the following season.—H. P.

## STOVE AND GREENHOUSE.

### THE EUPATORIUMS.

THIS genus is closely allied to that of the *Ageratum*, well known as a useful bedding plant, also to the *Hebeclinium*, another very serviceable decorative greenhouse subject. Those that are usually cultivated under the generic name of *Eupatorium* comprise but a few varieties. These are very useful where flowers in quantity are wanted either in a cut state or upon the plants during the winter or early spring months. They are of specially good service for large conservatories or greenhouses where it is impossible to grow many of the hard-wooded plants with that success one desires to see. Being plants of easy culture and of rapid growth, it is not a difficult matter to grow on a stock of young plants every year,

keeping the best only of the previous season's propagation, so as to have some at least of larger size if needed.

The species which forms the subject of the accompanying illustration is, perhaps, the most useful of any, as it flowers during the winter months, being easily had in flower to succeed the *Chrysanthemums*. Earlier than this it is scarcely desirable to flower it, although it could be had in good condition in October if need be. I have found it to be very useful during December and January, and in order to flower it then it is better to stop the shoots during the early part of September. The other two varieties—one of which is tall and the other dwarf—to which attention might be drawn are *E. odoratum* and *E. riparium*, but these flower during the spring season when many other plants, as bulbs, &c., are in their best condition. The culture is quite easy and growth too luxuriant if the plants are overpotted or treated with stimulants before the flower-trusses are well advanced. Two or three stoppings are certainly desirable, so as to form more bushy plants.



*Eupatorium Weinmannianum.* Engraved for THE GARDEN from a photograph sent by Miss Gaisford, Offington, Worthing.

Out-of-door treatment will answer well up to the middle of September from early in May. When housed, the ordinary temperature of a greenhouse will suit them; light, however, is necessary, so as to keep the growth as compact as possible. Propagation is best attended to about March, the cuttings striking freely enough in a little warmth. Amateur growers, instead of attempting to grow the Indian *Azaleas*, not always easily managed in such cases, would do well to try their hands on a few *Eupatoriums* instead. *E. Weinmannianum* is a native of South America. GROWER.

**Clematis indivisa and Niphetos Rose.**—Recently when at Bashford Nursery I observed these growing in the same house with the best results. *Niphetos Rose* was planted out in narrow beds near the front lights and allowed to grow up two-thirds of the roof. At both ends were planted *Clematis indivisa*, which covers all the space under the centre of the house. It comes into bloom early in the year and the bunches of white flowers sell well early in the season. The

heat that is given to the *Clematis* just suits the *Rose*, as it helps to bring on the blooms early. Nothing could be finer than were these *Roses*, and I was told by the grower that he obtained three crops from these plants every year.—DORSET.

### K. EMPFERIA KIRKI.

THIS is one of the many *Gingerworts* remarkable for the beauty of their blossoms, which, though they do not last long, are as a rule produced in considerable numbers from the one scape, so that in the case of vigorous examples a display will often be kept up a couple of months or thereabouts at this season. This *Kampferia* first flowered at Kew in 1881 under the name of *Cienkowskia Kirki*, and as such a coloured plate of it was given in THE GARDEN of November 19 of that year. Since that time, however, it has been by some botanical authorities relegated to the genus *Kampferia*, though it is still frequently met with as *Cienkowskia*. It forms, like many other of its class, a thick fleshy rootstock, from whence are pushed up Plantain-like leaves about a foot long and thin in texture. The flower-scape rises to a height of a foot or so, and the individual blooms are rose-coloured, with a golden blotch at the base of the lip. In size, colour, and general appearance they remind one a good deal of the flowers of *Miltonia vexillaria*. It is a native of the Zanzibar region, and forms a very pretty and useful subject for the stove. In such a structure it is of very easy culture, as it passes through the winter in a dormant state; then, on the return of spring, it should be shaken clear of the old soil and repotted, when if placed under conditions favourable to growth the leaves will soon be pushed up and followed quickly by the flower-spikes. A soil composed of loam, leaf mould, and well-decayed manure will suit this *Kampferia* perfectly. As it passes the winter in a dormant state, it must at that season be kept slightly moist—in fact, much the same treatment as a *Caladium* should be given it.

A second species, *K. rotunda*, was figured in THE GARDEN, August 18, 1888. The flowers of this are developed just as the leaves begin to push up. They are less regular in outline than those of *K. Kirki*, and the colours are altogether different, the lower petals being bright violet-purple, veined at the base with white, and the upper petals are entirely white. They are also very agreeably scented. This species, as a rule, flowers about April, and the foliage is now decidedly ornamental, being of a dark green tint marked with grey and purplish on the under sides. Regarded from a foliage point of view alone, *K. Gilberti* has much to recommend it. The style of growth is somewhat after the manner of the smaller *Funkias*, as it forms a dense tuft of bright green leaves freely marked with pure white. A large pan of this species forms a very pretty object for many months, or neat little specimens may be grown in comparatively small pots, and they are then extremely useful for decorating. They are all plants of easy culture, and the two last named species will succeed in a structure which is kept at a rather lower temperature than that necessary for *K. Kirki*.

H. P.

**Anthurium crystallinum.**—Although common and cheap, this *Anthurium* is one of the most beautiful fine-leaved plants in cultivation, and if it happened to be a novelty of the present day we should doubtless have it greatly praised. The large heart-shaped leaves are of a deep rich velvety green, while the midrib and principal veins are marked out in silvery whiteness clear and distinct from the rest of the leaf. The young leaves are of a pale brownish green, suffused with violet, which varies greatly according to the age of the leaf and the point from which it is viewed, the violet lustre depending greatly upon the

direction of the rays of light. All plants are, however, not of equal merit in the colouring of their leaves, some having the silvery bands broader and more clearly defined than others. In common with most of its class, this Anthurium is of easy culture, for it delights in a mixture of rough peat and Sphagnum, to which may be added a little fibrous loam, at the fancy of the cultivator. A good amount of sand should be mixed in the compost. The plant requires a moist portion of the stove, and as a good deal of its beauty is lost if the leaves are disfigured in any way, care should be taken to remove insect pests without bruising the foliage.—H. P.

**A triple Arum.**—I do not know if you are tired of monstrosities among Arums, but I send another one. It has three perfect spathes with one spadix only, and they are quite uniform in size and in arrangement on the single stem. Last year I sent you one that I thought far more curious than this, as the flower-stem was jointed and produced from the joint a perfect albino leaf, surmounted with a spathe of the ordinary form. I was then and am still anxious to know if a similar case has occurred, as I do not remember having seen a note of such a freak.—J. C. TALLACK.

#### GREENHOUSE RHODODENDRONS.

Now that the various Himalayan Rhododendrons and the numerous hybrids raised therefrom are, with the exception of *R. calophyllum*, all past their flowering season, the members of the Javan or tube-flowered group, whose period of blooming is limited to no particular part of the year, are in many cases flowering freely, that is to say, in the intermittent manner common to most of them, for they are continually pushing forth new shoots, which when mature are terminated by a flower bud that soon expands. Though these Rhododendrons are usually spoken of as greenhouse varieties, it is now generally recognised that for a greater part of the year a temperature above that of an ordinary greenhouse is essential to their well-doing, but during the summer months they do not require any fire heat. They are greatly benefited by a liberal use of the syringe, but if the atmosphere is too stagnant, mildew will sometimes attack the weaker varieties and cause a good deal of trouble. There is a great amount of difference in the constitution of the varieties of this class of Rhododendrons, one of the most robust being the oldest of all, Princess Royal, and as a rule the high coloured forms are weaker in growth than the pink ones. As their flowering season is limited to no particular period of the year, it will be fully understood that when repotting is to be carried out it cannot be done all at once, as in the case of the Himalayan hybrids, which all flower at much the same time, then make their fresh growth, and do not bloom again till another year comes round. The Javan varieties, however, behave in a totally different fashion, and as it would not do to repot a specimen just coming into flower, the operation must be left over till the flowers have dropped. The present, however, is a very suitable period for repotting those that require it and that are at the same time free of flowers or advanced buds. A good compost for this class of plants is fibrous peat, with a liberal amount of rough silver sand, and some nodules of charcoal mixed with the soil. This charcoal is especially necessary in the case of large specimens, as it is very essential to keep the soil sweet and fresh, for the delicate hair-like roots are very sensitive. Owing to this the draining of the pots should be very carefully done, for in many cases the plants will stand for years without repotting: hence it is so necessary to have everything clean and sweet. The soil must, as in the case of most hard-wooded plants, be pressed down firmly. It should also be borne in mind that Rhododendrons of this class are by no means vigorous rooting subjects; hence care should be taken to guard against over-potting, as large plants can be grown in comparatively small pots. It is also a very good time of the year to propagate these Rhododendrons by means of cuttings, which are by no means difficult to root, all that is needed being to

form the cuttings of the half-ripened shoots, finish them at the base with a rather long sloping cut, and then dibble them into pots prepared for the purpose. These pots should be well drained and filled firmly with very sandy peat. Care should be taken that the soil is well pressed around the cutting, especially guarding against any cavity at the base of it. After being watered they must be placed in a close propagating case in an intermediate house temperature, and in this way they may be struck, potted into small pots, and established therein before winter. H. P.

#### THE VARIEGATED IVY-LEAVED PELARGONIUMS.

THE Ivy-leaved section of the Pelargonium family has had considerable additions made to it of recent years, but this has chiefly been in the direction of greater variety of colour and an increased number of double forms. For these we are grateful, as anything that is less void of close and formal growth than the so-called bedding Pelargoniums must be considered an acquisition. The variegated section has not, however, had that same amount of attention bestowed upon it. The few varieties that are grown do not, on the whole, appear to receive that attention they should do, more particularly when thinking of *P. elegans*, which is undoubtedly the best variety in cultivation, the leaves of which are neatly margined with clear white, whilst the flowers also are white. This kind is well adapted for hanging baskets, and grown in this way it is very attractive for conservatories or greenhouses. Another use to which this pretty Geranium (I like the old-fashioned name the best) can be put is for filling up bare spots on rockwork during the summer. For this purpose it is particularly well suited. No better place for it could be chosen if it is desired to make any considerable increase in the stock this coming autumn. In pots, again, it cannot be put to a better account than as marginal edgings to greenhouse and conservatory stages, or for bracket plants or window boxes. *P. elegans* is not of rapid growth by any means, but its progress is pretty sure and reliable; hence it should not be planted too near those plants of like character which happen to be stronger growers. As an outside edging to flower beds it is also recommended, being in many respects better than several other plants so used, which have to be constantly pinched or trimmed to keep them within limits. Another and a much older variety used to be grown which had an occasional variegation of golden blotches, that eventually toned down to a pale green. This is no loss, in my opinion. Note should, however, be made of Duke of Edinburgh, of which the growth is as free as that of the green varieties, the foliage being broadly margined with white; also of *aureum marginatum*, the variegation of which is pale yellow. The cultural details are similar to those required for the green-leaved section, too rich a soil being in no case advisable. GROWER.

**Elæocarpus cyaneus.**—In selecting plants for adorning the greenhouse or conservatory there are many desirable subjects that may be kept in health, and can be depended upon to flower year after year with but little trouble. The *Elæocarpus* in question is one of this class, while the distinct character of its blossoms is another great point in its favour. It is a native of Australia, where it attains the dimensions of a small tree, but in this country flowers are freely produced while it is still a bush; indeed, I have had little specimens in pots only 6 inches in diameter which bloomed well. It is, however, as a bush 6 feet high or more that this *Elæocarpus* is seen at its best, for the numerous twigs being then all laden

with its beautiful blossoms the entire plant forms a charming sight. The flowers are pure white and bell-shaped, their most prominent feature being the delicate manner in which the petals are fringed, reminding one somewhat of the little alpine *Soldanellas*. When a plant is at its best this lace-like fringe is sure to attract the attention of all. These blossoms are succeeded by berries, which acquire a purple hue when ripe and are then decidedly ornamental; but as the flowers are the principal feature of the plant, the fruits are by some removed as soon as possible after the flowers fade in order to devote the entire energy of the plant to the production of blossoms. A glance at a coloured plate of this *Elæocarpus* in THE GARDEN, September 1, 1883, well shows the beautifully fringed flowers. If the berries are allowed to ripen they form a ready means of propagating this *Elæocarpus*, but as plants obtained in this way do not flower so freely in a small state as those obtained from cuttings, this latter method is usually employed for their increase. Cuttings are not at all difficult to strike if treated as the general run of greenhouse plants—that is, formed of the half-ripened shoots, dibbled firmly into pots of sandy soil and kept close till rooted. Established plants may be kept in health for years without repotting; hence it is very necessary when they are potted to see that good drainage is ensured, and the compost used should be such as will remain in good condition for a long time. Not only can specimens be kept in pots or tubs, but when planted out in a prepared bed they will do well. When in pots they may after flowering be placed out of doors, as is often done with many greenhouse plants, but if small they had better be plunged, in order that the roots may be maintained in an even state of moisture.—H. P.

#### SHOW PELARGONIUMS.

It was recently stated that the fine large-flowered show and fancy Pelargoniums are being neglected, and yet they are among the most useful and attractive of greenhouse plants. Some varieties recently in flower at the Royal Nurseries, Slough, are really superb; they are good growers and very free, and with proper culture successional in blooming. One of the brightest is Turner's Fireball, which has rich deep scarlet lower petals and glossy black top ones, very fine for exhibition. Duke of Norfolk is also brilliant in colour, the top petals dark, the lower petals deep crimson-scarlet, and it has a conspicuous white throat. Prince Leopold is very bright and so effective as an exhibition variety, that it invariably finds a place in a competitive group. Excellent is well named, as the flowers are of the finest form, the lower petals light crimson with a deeper veining and dark top petals, and also very free; and Martial, rich deep crimson with maroon top petals, is also good. One of the most distinct of the large-flowering show Pelargoniums is Purpurca, the lower petals being bright purple, edged with lilac or shaded with rose, a most attractive decorative plant. In softer tints, Joe, rosy purple lower and dark purple top petals; Maid of Honour, pink, with dark blotch on the upper petals; Magnate, very fine; Mystery, rosy salmon and dark top petals, very pleasing; Ronald, and Symmetry, which is well named, in colour lilac rose, are a selection of high merit.

As the plants go out of bloom at the end of June or later, according to the time of year at which they bloom, they should be placed in a cold frame or in the open air in a somewhat sunny position to ripen the wood. Water should be gradually withheld, so that the wood may become hardened and in a condition to make cuttings. Soft, green and sappy wood does not root nearly so well as that which is harder, and if placed round the sides of pots filled with a sandy compost and kept in a cold frame and shaded, so that the soil does not dry rapidly, the cuttings soon root. When rooted they can be potted singly into medium-sized "long toms," using a compost containing leaf-mould and sand, and the plants wintered in a greenhouse. R. D.

## CHRYSANTHEMUMS.

## CULTURAL NOTES.

Now that the plants are all in the pots in which they are to flower, except perhaps the latest batch that are to give us the last crop of flowers, provision must be made for getting them into their summer quarters without delay. Usually at potting time they are stood close together in a sheltered corner until all are potted. By that time the forwardest will have become nicely established in the large pots, and will be ready to undergo the usual routine of summer management. Where several hundred plants are cultivated for the production of large blooms and a large batch for cutting from in addition to a goodly number for providing late flowers, a large space must be provided for them during their summer season. The best site should be set apart for those plants that are to produce blooms for exhibition, as plants that are immature in growth cannot produce the finest flowers. If the growth of the plants has been gross during the summer with large leaves and thick fleshy stems devoid of woody tissues at the end of September, we know that the requirements of the plants have not been all that was necessary during the growing season. Too liberal use of manure in the potting soil and loose potting may have much to do with this state of things, but an unsuitable position for growth during the summer may have even more to do with the unsatisfactory condition plants are found in at the time stated. A position sheltered from the south-west and in the full blaze of the midday sun, and as long as it can be obtained during other parts of the day, is the best that can be chosen for the plants. Here with plenty of space the growth matures as it proceeds. The best position of all is beside paths near to the water supply, where abundance of light is assured and the plants standing on boards, slates, or tiles are convenient for attention and handy to water. Provision must be made to secure the tall-growing varieties against breakage. For those that grow 10 feet high or more two wires fixed to stout posts, if the line is a long one, will be required. To these wires the stakes in the pots should be made fast. Some cultivators tie the three branches loosely to one stake thrust into the pot. It is a much better plan, however, to tie the centre branch of the three to this stake and make the remaining two fast to temporary small stakes tied to the wires. In this way all the shoots or branches are spread evenly out and given an equal amount of space, so that the leaves of one shoot do not overlie those of its neighbour. By this means the development of the leaves will be perfect and will not be nearly so liable to attacks of mildew as they are when huddled together. Where the plants are of necessity placed in parallel rows in one block, they must be so arranged that the shade thrown from one plant does not affect the next plant. Where possible under such conditions the rows should run east and west and be at least 5 feet apart. The plants should be restricted rigidly to the number of shoots allowed, which usually is three. A few cultivators confine many of their plants to one stem only. I think, however, that this is a waste of time. A well-managed plant will produce three blooms as good as one. A single-stemmed plant allows no margin whatever for injury. All side shoots ought to be removed as fast as they appear. It is a useless waste of energy to allow these surplus growths to remain until they are several inches long and then remove them. The present bright

and warm weather is having its influence upon well managed plants, which are making rapid and satisfactory progress. Continue to supply them with water at the roots as required. Newly-potted plants do not require the same quantity as those that have become well established. Any plants that exhibit a tendency to paleness in the foliage, like Miss D. Shea does for example, directly after potting ought to be kept rather dry at the roots for a time. Syringe the foliage twice daily. E. MOLYNEUX.

**Recent Chrysanthemums.**—Mr. Michael Barker, the editor of the "American Chrysanthemum Annual," has just edited another work with the above title. It forms Bulletin No. 91 of the horticultural division of the Cornell University, Ithaca, N.Y. There are several illustrations in black and white, and after giving a short review of the Chrysanthemum in America, notes on the cultivation of recent varieties grown at Cornell last year are supplied with dates when the buds were taken, and an opinion of their relative value. Most of the novelties are of American origin. Other chapters include methods of cultivation, insect friends and enemies, and the testing of varieties.

**Chrysanthemum Mile. Therese Rey.**—This splendid white Japanese variety raised by M. Ernest Calvat, of Grenoble, in 1892, and already well known to our exhibitors and growers, is now being distributed in Australia. An excellent full sized illustration of it appears in the *Australian Agriculturist* for the 1st of May last. Most of the leading show flowers in that colony are of European or American origin, but growers there are anticipating that their own seedlings will ere long occupy a much more prominent position. They are stated to be of a more robust constitution than the imported varieties.

**Chrysanthemums in Australia.**—Seedlings are now being raised in Australia. Last year one of my correspondents spoke very highly of one that had been raised in Victoria called *Pride of Madford*, an incurved Japanese, colour bluish purple, with a silvery reverse. I notice in the "American Chrysanthemum Annual" that Mr. H. J. Carter, of Sydney, refers to it as a beautiful Melbourne variety. Since then I have received a report of the Sydney Chrysanthemum show held in April last. Some colonial raised seedlings of great promise were staged, and the floral committee of the Horticultural Society there awarded the majority of them first class certificates. The principal raisers appear to be in New South Wales—Mr. G. H. Kerslake, Mr. J. H. Horton, Mr. S. B. Levick, and Mr. J. Upton. The names of the flowers were G. H. Kerslake, a white Japanese, with long drooping petals; Oceana, an incurved Japanese, with broad petals, colour clear yellow; *Pride of Ellwood*, a reflexed Japanese, with long petals, colour amber-yellow; Mrs. J. H. Horton, a Japanese incurved, old gold suffused with salmon, reverse buff; Minembah, a Japanese, colour deep yellow, lined reddish brown, reverse pale yellow; Samuel Upton, Japanese incurved, of deep rosy amaranth, with reverse silvery; Mr. James Toohey, a Japanese incurved, colour pale lilac, reverse silvery; and Lady Gormanston, a seedling raised in Tasmania, but exhibited at Sydney, colour white, slightly tinged lilac.—C. H. P.

## SLATE AND OTHER ROOFS.

PREVIOUS to the development of railways the roofs of farmhouses, cottages, barns and sheds in southern and midland England were made of thatch and tiles—substances which with age assume hues of indescribable richness and delicacy and of infinite variety, thereby enhancing the charm of rural scenery. No one now dreams of employing any material except Welsh slate; unless, indeed, for outbuildings and the like, he descends to the greater obscenity of galvanised iron.

The prettily situated town of Luton is, for the most part, of recent growth; the house walls are of red brick, and here in Bedfordshire, forty years ago, it never would have occurred to any builder to make his roofs otherwise than of tiles or thatch, steeply pitched. Now there is not a brown or russet roof to be seen, the angle of the gables has been greatly enlarged, and the effect of an expanse of cold, yet shadowless slate, with closely clipped eaves, is utterly out of harmony with the surroundings. What has taken place at Luton is just what has happened to hundreds of other English towns, and, worse still, English villages.

The slate of Cumberland differs from that of Wales in being of coarser grain and less finely laminated. But it is of an exquisite greenish-grey, with silvery reflections and a glaucous bloom. It makes a beautiful roof, as many country houses in the north of England and south of Scotland testify, especially those built towards the close of last century. Besides this admirable material, in some parts of Cumberland and Westmoreland thin plates of limestone were of old the common roofing material. The porous texture of this stone renders it, under a moist atmosphere, favourable to the growth of Lichen, resulting in a many-tinted tapestry which is altogether delightful. Even here Welsh slate has begun to displace the native product. All round for miles, dotted on the grassy slopes, may be seen the grim, grey garths and hay barns, with stone roofs deeply stained with olive and russet, and splashed with golden Lichen. But the harmony is shattered by spick-and-span railway buildings roofed with Welsh slates; and even in the villages it is plain that the old fashion is falling out of favour, for all the new dwellings and the meeting-houses are roofed with the same material.

The close, crystalline texture of these slates enables them to resist all kindly vegetable pigment. It is true that sometimes near the sea a salt crust is deposited giving foothold to an orange Lichen which creeps over the surface with charming effect; but generally the tone remains unchanged, and rarely is a roof now put on with liberal eaves.

Matters are rather worse in Scotland. Nithsdale and Annandale once boasted a kind of roof peculiar to themselves. Thin rectangular flags of red sandstone, measuring 2 feet on the square, were prepared in the quarries of Lecharbriggs and Corncockle, and laid on diamond-fashion, formed an effective finish even to the humblest cot. But these are used no more, the Welsh slates everywhere being now seen. Few people are aware how much tile roofs were in use in Scotland from early times, and how greatly the scenery has suffered from their disuse. Those square border keeps which are such familiar objects in the Lowland landscape once had a very different appearance. There is preserved in the British Museum (Cottonian collection, "Titus," e. xiii., folio 76 87) a report on the military strength of the Western Marches by an English officer in 1563-66. This is illustrated by water-colour drawings of the chief strongholds and some of the towns in Dumfriesshire and Galloway. All the castles except Annan, and all the houses in the towns, are shown with steep red roofs—that is, roofs of tile. The churches have grey roofs of stone, and the tower of Annan has a blue roof, apparently meant for lead.

It may seem a small matter to complain of that, in a few years, English villages and Highland shielings will soon be uniformly sheeted with changeless mauve slate, and the complaint, as has been admitted, is a futile moan.—*Illustrated Gardener*.

**Notes from Chester.**—The Paeonies are in full splendour, rich reds, pale pinks, whites and creamy kinds as delightful in scent as they are varied in colour. Irises, too, are splendid, as beautiful as Orchids, with graceful outline wedded to simplicity of form and colour schemes all their own. Each of these families, however, is so large, that it would be a difficult matter to send specimens that would show fairly what they are like grouped in masses



as we see them here. From the herbaceous quarters we send you two *Inulas* which are grand just now, *I. glandulosa* with its tangled fringed fringe of golden coloured ray florets about its cone of gold, and *I. Oculus Christi*, not quite so large, its crown flatter and its fringed gold lace of deeper orange. *Campanula persicifolia alba* is splendid just now. The gay rosy *Catchfly* (*Lychnis viscaria splendens* fl.-pl.) makes a red ridge of well-defined colour and lasts long. *Polemonium Richardsoni* album and *Aster alpinus rubra* are both beautiful and valuable acquisitions. In addition we send some flowering shrubs. The two *Brooms* are lovely, *Cytisus scoparius pallidus* is literally crowded with its yellow blossoms, and *Cytisus trifoliata* is rich and compact, whilst the healthy green of its foliage tells with marked effect. *Potentilla fruticosa* is full of its delicate cup-like blossoms, and the *Allspice* (*Calycanthus floridus*), with its rich brown-purple flowers, is a conspicuous occupant of the shrubbery border. We also send a few blooms of *Romneya Coulteri*, the Californian Poppy, for the sake of pointing out that with us the *Romneya* has stood the severity of the winter out in the open without protection.—DICKSONS, Chester.

## NOTES OF THE WEEK.

**Dendrobium moschatum.**—I enclose you a raceme of *Dendrobium moschatum* to see what you think about it.—J. F. WILKINSON.

\*\* A fine raceme of this handsome species.—Ed.

**Strawberries from Burghley.**—Mr. Gilbert sends us some very fine specimens of Strawberry Searlet Queen, of which the flavour is excellent; also Royal Sovereign, the fruits immense, rather watery, and altogether too big for a pretty mouth. We do not gain much by bringing out such monstrous fruits.

**The Bermuda Buttercup** (*Oxalis cernua*).—I enclose a few flowers of the Bermuda Buttercup, which you may like to see. This plant has had some hundred blossoms on it and was very brilliant, but it closes except in bright sunshine. It has a sweet smell.—SCOTUS.

\*\* Large and pretty flowers of a clear yellow colour.—Ed.

**Polygonum capitatum.**—Most *Polygonums* are such robust growers that they can only be admitted to the roughest parts of a rock garden, but this variety is of very neat prostrate habit. The flowers, which are most freely produced, appear in globular heads of a pale pink colour about half an inch in diameter. The oval leaves are alternate on very short stems, they are green in colour, but deep red at the margin in apex, and covered with minute red hairs.—F. W. M.

**Chrysanthemum Zawadskyi.**—For bold effect in the rock garden few plants are more adapted than this handsome species, especially if kept on a ledge by itself. A small specimen planted less than two years ago at Exeter in Messrs. Veitch's rock garden now covers a space of nearly a square yard, the whole plant being one mass of large delicate pink flowers not more than 9 inches or 10 inches from the ground.—F. W. M.

**Anthericum liliastrium major.**—All the *Anthericums* are beautiful and useful, but the one under notice, however, is, I think, the best of the family. It is practically a miniature *Lilium Harrisii*. I saw a bed of it the other day in Messrs. Jeffries and Son's nursery in full bloom, which was lovely. A finer border plant would be difficult to find. Although *A. liliastrium* is a fine old garden plant, the major var. is in every way much finer, and one of the best flowers for cutting I know.—THOS. ARNOLD.

**Mertensia virginica.**—I noticed on page 421 of THE GARDEN for June 15, and also in "Notes of the Week" in THE GARDEN of June 8, allusion is made to *Mertensia virginica* being in fine flower. Surely this must mean *M. sibirica*, as I

believe I am correct in stating *M. virginica* to be a March and early April blooming plant, making a grand show where not out by early frosts, and not continuous in flowering like *M. sibirica*. I shall be glad to know if it is not a mistake mentioning *M. virginica* as being in flower at the present season—that is in June.—M. P.

**Hemerocallis flava.**—This fine hardy plant is doing exceedingly well here this year; I have never before seen it so fine. One specimen has over fifty flower-stems, most of which are bearing eight flowers or buds and are over 3 feet high. Altogether it is the most perfect specimen of its kind that I have ever seen, and having so many flower-stems the number of flowers open at one time is much larger than usual and makes a display that would be impossible with a smaller plant. I counted to-day a hundred flowers open on the one specimen.—J. C. TALLACK.

**Carpenteria californica.**—The large specimen of this flowering shrub shown by Mr. J. T. Bennett-Poë at the Drill Hall on Tuesday was a fine example of cultural skill, as it was luxuriant in vigour and most profusely bloomed, being literally covered with fine clusters of flowers. There are a number of choice and beautiful flowering shrubs not quite hardy enough to withstand our winters well worthy of such treatment as this *Carpenteria* has received, but the general rule, unfortunately, is because they cannot quite be trusted in the open air they are not grown at all. This plant was one of the features of the meeting, and was much admired.

**Hedysarum multijugum.**—Some time ago this beautiful Chinese shrub was mentioned in THE GARDEN as having stood the test of the last severe winter. It is now a mass of flower on a rocky bank at Exeter, and its long shoots covered with crimson-purple flowers look most graceful and effective. It requires a well-drained soil and full exposure to the sun.—F. W. MEYER, Exeter.

\*\* This shrub was also flowering freely at Kew recently, where we saw a little bed filled with it, and a graceful light group it made, the shoots being slender, the leaves long and narrow, with tiny leaflets, and the rosy purple flowers disposed thinly in long racemes. It would be most effective planted in association with some other choice shrub that flowered at the same time, some of the pretty *Brooms*, for example.—Ed.

**Saxifraga flagellaris.**—This is a most distinct and handsome Reekfool, introduced from Colorado, where it grows at a very high altitude, but, according to good authority, it also occurs on the Caucasus. Messrs. Veitch (Exeter) received some plants of it last autumn and it is now in full bloom. The flower-stems are hairy and viscid, each stem bearing (3 inches or 4 inches above the ground) three bright yellow flowers comparatively large in size. The foliage is more like that of a *Sempervivum* than a *Saxifraga*. The thick, fleshy leaves are green and smooth, with hairs on the margin only, and form an incurved rosette not much more than 1 inch in diameter. Most curious is the way the plant reproduces itself by thread-like stolons, each terminating in a tiny rosette.—F. W. M.

**A few good Spanish Irises.**—There are many varieties in catalogues that it is perplexing to discover the best. When in the Long Ditton Nursery recently we noticed large beds of the following kinds, all of great richness and beauty, showing to advantage in a mass: Princess Ida has whitish standards and yellow falls, a pleasing contrast; Oberwinaar is of a lovely citron-yellow shade, peculiarly clear and beautiful; Louise, pale blue; Golden King, intense yellow, very handsome; Don Quixote, shades of blue, a charming Iris; and Donna Maria, also shades of blue. We are pleased to know that Spanish Irises are grown well in many gardens and nurseries. They form a delightful and important class of hardy bulbs.

**Papaver pilosum.**—This little-grown Poppy is deserving of more favour than is generally accorded to it. At the present time a patch

6 feet long by 3 feet wide is in flower and will remain so for another month. The plants average a little over 2 feet in height, and being thickly planted, spread in the morning, a canopy of orange-buff above the bed, the petals being, however, of such delicate fashioning, that a few hours' sunlight sees them fade, to be replaced by fresh flowers at the next dawn. The individual plants perfect from 100 to 150 blooms, are quite hardy, and want little or no attention, growing in the wild garden as freely as in the bed; but wherever grown, this Poppy should be planted in masses, as, on account of the fugitive character of its blooms, single specimens give but a poor idea of its effectiveness in colonies.—S. W. F.

**Abelia triflora.**—One is often asked for the name of a shrub for covering a wall that is out of the common lists of wall trees. This pretty North Indian shrub, now that it is beautiful in flower, appeals to one. Out of flower it is not remarkable, but when covered with clusters of pale pink flowers most people would think it a refined and beautiful shrub. The perfume, too, is sweet, and that in a wall shrub is to be considered when planted against a house near windows. Unfortunately, it is not a "stock" plant in nurseries, so there is always some difficulty in getting it. It is in full flower, and will be for another week or more, against the herbaceous ground wall (east side) at Kew. A coloured plate of it may be seen in the tenth volume of THE GARDEN.—W. G., Kew.

**Frost in the middle of June.**—For several nights we have experienced slight frosts, but the worst occurred on the morning of June 15. On high ground well above the river Wye we registered 2°, which must have been considerably exceeded in the lower parts of Ross, as all the Potatoes, Kidney Beans, and Vegetable Marrows were blackened and cut down to the soil. So far as I can learn, fruit suffered no damage.—ROSS.

— On Friday night, the 15th inst., there was a very sharp frost (7°) here in this locality, doing great damage to growing crops, especially Potatoes; even those that were earthed and 12 inches high are killed to the ground, while Searlet Runners and Kidney Beans are completely ruined. Trees and shrubs have suffered. The Spruce and Rhododendrons in new growth were a beautiful green, but now they are the same as they were after the winter, and all the young growth is killed. Laurels and Beech are similar. It is quite the exception to have frost here so late in the year; they often have it in the dales when we see no signs on the hills.—C. REEVES, *Two Dales, Matlock*.

**The great white Campanula.**—There are several beautiful white Bellflowers, but the most lovely is without question that which is burdened with the embrous name *Campanula persicifolia grandiflora alba*. I should have no hesitation in naming it as the finest white hardy border flower we have in gardens. It is far and away superior to what is simply called *C. persicifolia alba*. Its flowers are not only larger, have longer and more pointed corolla lobes, but while the former is a cold white, the best sort has a suspicion of purple, which gives a soft whiteness to the flowers. On light soils it is very hardy, and though never one of the most robust growers, it is certain to appear in due season and give weeks of abundant blossom. I do not know another flower that combines so much beauty of form in its flower and elegance in growth with such purity of petal. The fine masses of it that for some time past have made a border at Kew (by the Cambridge Cottage wall) a great attraction, to even the most indifferent of the visitors, show well what a grand border flower it is. The chief point in obtaining it is to observe the name *grandiflora alba* and see that you get the plant.—W. G., Kew.

**Haplocarpha Leichtlini.**—This South African perennial composite (lately introduced by the well-known M. Max Leichtlin, of Baden-Baden) is now blooming abundantly in Messrs. Veitch's nurseries at Exeter. The plant has a peculiar *Gazania*-like appearance and (with the

exception of the colour) somewhat resembles *Gerbera Jamesoni*, but is more sturdy. The leaves are cauline, arranged in a rosette lying almost flat on the ground, individually 6 inches to 8 inches long, deeply lobed, about 2½ inches wide, but very narrow at the base. The upper side of the leaves is deep green, but the underside is covered with a thick woolly coating to such an extent as to appear completely white. The composite yellow flowers are borne on stems 8 inches long, each flower-head measuring 2½ inches in diameter. The outer or ray florets are of a bright golden yellow, while the disc florets are of an orange colour. The involucre bracts are of a brownish tint and covered with pubescence. This woolly coating extends all the way down the stem, but does not entirely hide the brown ribs of the latter. The plants growing at Exeter are doing well in a sunny position in stony soil and are very striking in appearance. If it proves sufficiently hardy to stand the winter without protection, it will be a most desirable acquisition for the rock garden.—F. W. M.

**Herbaceous Pæonies at Long Ditton.**—A few days ago in the nurseries of Messrs. Barr and Son, Long Ditton, the herbaceous Pæonies were remarkably fine, though the fierce sunlight has spoiled the blooms to a great extent. One sees in such a collection as this how greatly the Pæony has been improved upon, the newer varieties having very large yet not coarse flowers, full, sweetly scented and delicately coloured. It is impossible to note all the good kinds in flower, but we selected the following as specially worth mention. Of the double varieties the finest were *Princess Clothilde*, white, with large flesh coloured guard petals, passing to white and scented like a Rose; *Eugene Verdier*, white and bush, a lovely kind; *Agnes Barr*, yellow centre when the bloom first opens, but passing to white, and set off by large rosy coloured guard petals; *Auguste Milleiz*, white and rose; *Solfaterre*, opening yellow, but passing to white; *Comtess of Clancarty*, white, very full; *Sir Henry Irving*, double rose, with deeper coloured buds, very free and rather late; *Mme. Furtado*, rose; *Mme. Defatry*, white; *Louis van Houtte*, a splendid crimson; *Prince Prosper*, deep crimson, with golden stamens; *Lord Salisbury*, very free, also of an intense crimson shade; *Leon*, white, with a few stripes of crimson-red on some of the petals; *Mme. Loise Mère*, late, very free, white, a dense compact flower; and the very late *Nimrod*, a deep rose flower. Of the singles, most charming were *Venus*, white and rose; *The Bude*, white; and *Queen of May*, rosy pink. These beautiful varieties last longer than many suppose, as testified by the plants in this nursery. We also noticed many promising seedlings, especially a single white, which we think better than those already in cultivation. The Pæony is a splendid June flower for massive growth, freedom and fulness of bloom, some varieties bearing flowers like a *Viscountess Folkestone Rose* for delicate shade and loose, graceful form.

**Notes from New Zealand.**—Mr. A. Dawson, of Hogarth House, Chiswick, sends us a letter lately received from New Zealand, from which the following notes will be of interest to many: "The last lot of Raspberries were almost a failure, but the first lot you sent have multiplied exceedingly, and will require vigorous treatment to prevent them becoming a fearful plague. They spread worse than Blackberries, and that is saying something. The whole space is a dense mass of suckers, and they almost killed the fruit-bearing canes. I shall cultivate them like hedges and wide enough apart to keep a horse cultivator at work. I am making a plantation of Blackberries in the same manner, as I have a splendid standard sort, growing canes nearly 6 ft. high, which I prune back to about 3 ft. 6 in. or 4 feet, and a spike loaded with berries is a sight. I should think that each cane averages nearly 2 quarts of berries. So it is a crop worth growing, the market price being about 2½d. to 3d. per quart. I have got a good lot of Tomato seed from this year's plants especially cured by drying up the apple and separating the seed, which I send by this mail. The Asparagus is

growing well. Some of it I have planted in its final position at once, whilst I have also made a nursery bed to see which does the best. I do not understand why the Cucumber seed should do so badly with you. I planted some of the same seed, and I have been getting lots of Cucumbers 24 inches long. I suppose they do not like going back to the colder climate. I took no special care with them, only just dibbling the seed in the ground here and there and they grow merrily. The fruit grows very rapidly and is extremely tender, so much so, that if you take up one by the end it snaps in two directly. The Japanese Plums are the thing to grow here. I have seen *Ogon* and *Satsuma* as large as Apples. Most of the varieties are sure and heavy croppers, so much so that heavy thinning is always necessary. You may see quite a crop on a two-year-old tree. The Botan ought to do well with you. My outdoor Vines are all doing splendidly, each Vine of one stem about 8 feet long trained about 1 foot above the ground bearing fifty bunches—of course, far too many, but we cut off the extra bunches when the berries are the size of Peas and turn them into jam, which could not be distinguished from Gooseberry jam in flavour.

## PUBLIC GARDENS.

**A present to Durham.**—Viscount Boyne has presented the inhabitants of Wellington, Durham, with 18 acres of land, sloping towards the river Wear, for the purposes of a public park.

**Metropolitan Gardens Association.**—At the monthly meeting of the Metropolitan Public Gardens Association, Lancaster Gate, the Earl of Meath presiding, fourteen new members were elected, and a communication was read from the City Parochial Foundation stating that the governors were willing to render assistance to the extent of £1000 to certain schemes of the association of which they might approve, for the provision of smaller open spaces. It was announced that the association had completed and opened St. Peter's Churchyard, Walworth, on the 23rd ult., and Woolwich Churchyard on the 31st ult. It was stated that the completion and formal opening of the riverside ground at Battersea would have to be deferred for some months, pending the formation of a new road; meanwhile the public were able to use the ground in its unfinished condition. It was hoped that the laying out of the disused burial-ground in Long Lane would be shortly begun. It was agreed to take steps to acquire a similar ground in Woolwich, and to grant applications for seats for Chiswick, East Ham, and Canning Town. The chairman mentioned that the Museums and Gymnasiums Amendment Bill had passed the second reading in the House of Lords, and that the London County Council had invited the association to the public opening of the Bethnal Green Poor's Land, a piece of ground which had been saved from the builders some years ago by the joint efforts of the association and a local committee.

**The weather in West Herts.**—There have been no particularly warm or cold days during the past week, but all the nights have been cold for the time of year, and on those preceding the 13th and 15th 2° and 4° of frost were respectively indicated by the thermometer exposed on the lawn. No damage was done by these frosts in my garden, but on Berkhamsted Common a good deal of the young Braeken has been killed. The temperature of the ground at 2 feet deep now stands at 62°, and at 1 foot deep at 65°. At the latter depth the reading is 4° above the June average and 5° warmer than at the same date last year. A little rain fell during the night of the 18th, but only sufficient to lay the dust. The drought still holds; in fact, since the middle of May, or for five weeks, there has been no rain worth mentioning. The total rainfall of the last

four months, which were all dry ones, falls short of the average by as much as 4 inches, or about double the amount usually deposited in any one of these months. No measurable quantity of rain water has come through the light soil percolation gauge for forty-six days, and none at all since the middle of May. During the past fortnight the air has been unusually dry, the average difference between the readings of the dry and wet bulb thermometers at three o'clock in the afternoon being 13°. During the same fortnight last year the mean difference was only 5°.—E. M., *Berkhamsted*.

**A horticultural impostor.**—There is a man going about the country who is pleading poverty, said to be brought about through ill health. He professes to be an expert propagator, having been in the employment of Messrs. Henderson, Pine-apple Nurseries, and having raised *Allamanda Hendersoni*, *Pimelea amabilis*, and many other good things. He came to me with letters of reference, &c. I helped him by giving him sufficient money to procure a bed and refreshments for the evening, also recommended him to a friend who found him employment; but of this he soon became tired and retired to the nearest public-house, where he soon spent his last sixpence. Going back to my friend with fair promises, he was once more put to work, but, alas, this soon proved too much for him, and he once again found his way to the public-house. This time he was very abusive to my friend. He then came back to me, and not knowing what had happened or that he had been employed, I further assisted him. He then borrowed my "Garden Annual," professing that he wanted to find the address of a relative or friend. I have not seen the man or my "Garden Annual" since. My friend tells me that while he was with him he received a P.O. for a considerable amount. He is about 5 feet in height, sixty-five years of age, and has sandy whiskers. Such an impostor should be punished.—THOMAS ARNOLD, *Cirencester House Gardens*.

## OBITUARY.

**Death of Mr. R. C. Kingston.**—Many will hear with regret of the death of the well-known gardener and estate manager of Brantingham Thorpe, who, after a short illness of only a few hours, died on Thursday, June 6, at the age of 77. He was a foreman at Chiswick for some years, and in the year 1841 took charge of the gardens at Brantingham Thorpe, where in a very few years he became well known as a most successful exhibitor.

**Flies and beetles** (*A. S. A., Marple Bridge*).—The two flies you sent are specimens of *Leptis scolopaea*, a very common insect. The beetle is *Telephorus fuscus*, commonly known as sailors, also a very common insect. Neither the fly nor the beetle will do any harm in gardens.—G. S.

**Royal Horticultural Society.**—The next meeting of the Royal Horticultural Society will be held in the Drill Hall, James Street, Westminster, on Tuesday, June 25, when special prizes will be offered for hardy herbaceous flowers. Professor Henslow will give a conversational lecture on some of the most interesting plants in the day's exhibition.

**Names of plants.**—E. S.—1, *Robinia Pseudacacia*; 2, *Anthericum liliastrum*; 3, *Clematis paniculata*.—*Campione*.—*Fuchsia fulgens*.—E. F. T.—1, *Lilium Martagon*; 2, *Spiraea filipendula*; 3, *Hemerocallis flava*; 4, *Centaurea montana*; 5, *Iris graninea latifolia*; 6, *Allium Moly*.—C. B. B.—1, *Saxifraga tritricata*; 2, *Helianthemum vulgare* var.; 3, *Dianthus plumarius*; 4, *Aster alpinus*.—G. G. C.—The shoot sent looks like that of *Viburnum Opulus*, the wild form of the garden Snowball Tree, and a pretty flowering and berry-bearing shrub that grows well in wet places.

No. 1232. SATURDAY, June 29, 1895. Vol. XLVII.

"This is an Art  
Which does mend Nature: change it rather; but  
THE ART ITSELF IS NATURE."—Shakespeare.

## ORCHIDS.

## NOTES ON CATTLEYAS.

THERE is not a month in the year in which the flowers of this most important and beautiful genus may not be enjoyed, the labiata section alone keeping up a constant succession of their gorgeous blossoms from January to December. Besides these the guttatum and bicolor types make a pleasing change, and perhaps in some cases these are even more looked forward to than the former groups. The great majority of Cattleyas are among the easiest of Orchids to cultivate provided healthy and well-established plants are procured in the first place, but if they once get into a really bad condition there are few more difficult to bring round. This does not apply to newly-imported plants, no matter what their condition, as they are established with greater ease than some other genera, but wholly to ill-cultivated specimens in our Orchid houses. The pseudo-bulbs and leaves of the former are only shrivelled from want of heat and moisture, in the presence of which the latent buds at the bases will soon push strongly into growth, and in a few seasons the plants are as strong and healthy as ever. The latter, on the other hand, through years of ill-considered treatment have fallen into a thoroughly debilitated state, and from this they seldom recover. Although several of the species require more heat than the rest, this can usually be arranged by a little care in arrangement in one house; still where more heat is at command it is as well to remove thereto at least *C. Dowiana*, its variety *aurea* and *C. superba*, as these of all others delight in ample heat. The Cattleya house should be fairly lofty, well ventilated and light, the best aspect being a house running due north and south. The minimum winter temperature must be as near 55° as possible, rising to 60° by day with fire heat. In summer 70° is ample in the absence of sun, but when bright the temperature will of course run much higher. A close or stuffy atmosphere must always be guarded against by judicious ventilation, as nothing so tends to the propagation of insects, the growth under these conditions being also unsatisfactory. One of the most distinct species now flowering is

*C. ACLANDLE*, a very beautiful and somewhat variable kind, introduced in 1839 from Brazil. If proper care is taken to keep the plants moist, this Cattleya is most satisfactory on fairly large blocks, and these must be suspended to get the full benefit of light and air. In winter the utmost care is needed, as in the somewhat dry atmosphere prevailing at this time the blocks soon part with the moisture, and a watch must be kept or the small pseudo-bulbs shrivel and lose their energy. It grows about 6 inches high, and the pseudo-bulbs each bear two leaves. The flowers frequently occur in pairs, and are about 4 inches across in the best forms. The colour of the sepals and petals is usually of a brownish green, beautifully spotted and streaked with purple and yellow. The lip is magenta veined with purple, spreading in front, but narrowed at the base. If grown in pots or baskets only a very little compost must be allowed and the plants disturbed as little as possible.

*C. GIGAS* is a noble species bearing very large, richly-coloured flowers. The pseudo-bulbs are short in comparison with the leaf, and it flowers upon the current year's growth. All of these

species require careful autumn treatment to avoid exciting them into growth before the winter, as unless this is done no flowers will be produced. It thrives well in suspended baskets and may be grown in the ordinary peat and Sphagnum mixture, this not being used in too great bulk. It is a native of New Grenada and has several varieties, the best forms usually flowering somewhat later than the type.

*C. HARRISONIANA* is a Brazilian species of considerable beauty, and very free-flowering. It is very erratic in its season of blooming and sometimes produces two flowering growths in a year. It grows about 18 inches high and produces the racemes from the top of the stems. The typical flower is rosy pink in ground colour, with a yellow stain on the lip. It has several varieties, including *maculata*, *candida* and *violacea*, the names of each being descriptive of the colour. The usual treatment as to temperature and compost suits this species, but it is well in all cases where possible to keep the plants entirely at rest during the winter. If growths push late in the season the plants should be allowed a little extra warmth in order to get them finished up without delay. *C. Harrisoniana* is an old species, having been introduced as far back as 1836.

*C. MOSSLE* is so well known and appreciated that any description is quite superfluous. It is, moreover, extremely variable, hardly two plants being exactly alike in all particulars. This, too, is sometimes late in finishing its growth, and is better for a full temperature during late summer and early autumn. It may be grown in pots or baskets either suspended or on the stage, and will never fail to give a good account of itself at flowering time. It was introduced in 1836 from Guayra and named in honour of a Mrs. Moss, of Liverpool. Another beautiful species of the labiata section is

*C. WARNERI*, which is a native of Brazil, introduced in or about 1859. This has large and richly-marked flowers, bright rose in ground colour, with a remarkably fine lip. The culture of this plant is not quite so easy as that of some others, but if attended to and kept as near as possible to its natural season of growth and rest, it will usually be satisfactory. This species ought never to be repotted until after it has flowered, as the roots that are then emitted from the base of the pseudo-bulbs re-establish the plants at once.

H. R.

## WATERING ORCHIDS.

THERE is no more important operation connected with Orchid growing than watering, and none oftener mismanaged. To entrust this to a careless or thoughtless assistant would mean the positive ruin of the healthiest collection, and even the most experienced practitioner needs all his wits about him if the work is to be done with despatch. In watering a mixed house of Orchids this is especially the case, even when all are in full growth, allowance being always necessary for the condition of the compost, the position and comparative vigour of the plants. I never feel absolutely at home watering any plants that may have been purchased in pots until I have myself repotted them, for although one can form a fairly correct idea as to condition by the appearance of the compost and roots and the growth of the Sphagnum, it is not always to be relied on. Many nurserymen are, unfortunately, in the habit of repotting all plants sent out, or at any rate surface-dressing them, for the sake of appearance, whether they require it or not, and inexperienced cultivators are occasionally misled by the look of the plants. They commence to water just as if they were well established in the pots, only to find after a time that it has not only been labour in vain, but positively harmful to the plants, the damaged ends of the roots having decayed through over-abundant moisture. An oft-repeated question is, How often should I water such a plant? indicating perhaps a *Dendrobium* or an *Odontoglossum*. There could not well be a more absurd one, or one more difficult to answer.

Even supposing two species are in full growth, one may require syringing overhead, to another it may be injurious. The former will not need watering nearly as often as the latter. One may be suspended from the roof in a sunny position, the other standing in a shady, moist corner of the house. Again, the size of the pots, the thickness and quality of the rooting medium, the nature of the roots, and the length of time they have been potted must be studied and many more by the operator with the watering-can as he passes along. This seems a formidable array, but it is really not so when a little experience has been gained, but above all things I would warn amateur cultivators not to get into a careless way of watering. The plants may not appear to suffer; in fact, many may perhaps seem to be doing well, but a time of reckoning will come, and this probably when it is too late to arrest the backward tendency of the plants. Orchids differ in this respect from any other plants. One may have a houseful dry for a week even at this time of year and possibly only a few would show any ill-effects. Leave a house of ordinary greenhouse or stove plants for the same time, and most of them would be hanging over the pots dead or dying. Yet the mischief is done to the Orchids none the less, and it will show in time. It is just the same with overwatering. At potting time the decayed roots will be found; the effects of this will be seen by the subsequent weakly growth, and all for the want of a little intelligent reasoning or forethought. It is not within the scope of this note to quote the varying kinds or to give precise directions of any sort, more good being done by mentioning a few generalities or axioms to be observed. The atmospheric conditions outside will be noticed by the cultivator before he commences damping or watering. If the day is likely to prove dull or wet, or if the house for any reason is not quite up to the proper temperature, he will use no more water than is absolutely necessary, and will take great care that none is allowed near tender young growths or to collect in the axils of the leaves. But, on the other hand, should the air be clear and the sun bright, he will take care that the moisture applied to the roots and the atmosphere is adequate for the demands to be made on it by the need of the plants, and to replenish that wasted by drying winds and the sun's action. On such mornings an early start with the moisture is quite as necessary as with the ventilation, and for somewhat similar reasons. Many of the terrestrial kinds will be found to require proportionately more water at the roots than the epiphytal species, as they do not possess in a like degree the power of drawing their supplies from the atmosphere. This is an interesting faculty in Orchids, by the way, and will, I think, have to be considered more by growers than is at present the case. Besides what may be termed comprehensive details in connection with watering, there will always be individual circumstances to alter special cases, and each grower has to a certain extent to shape a course for himself. He may read the remarks of others and follow instructions given, but until he begins to reason for himself and attain a habit of close observation no real progress will be made.

R.

## HOW TO POPULARISE ORCHID GROWING.\*

As in everything else, I take it the first thing is observation; use your eyes properly, and you will soon see whether a plant looks ill or well, and this in Orchids is especially the case. A few days will often show you if a new plant is happy in its strange home. On the other hand, Orchids generally are the most long-suffering plants, and will take years before they actually die from ill-usage, so that there is time for a beginner to learn, and to experiment in all kinds of treatment. We cannot, I think, hope

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to popularise Orchid growing until a fair idea of their modest needs is more common and widespread than it has been hitherto. This is, I think, the first point to be insisted on. The next and still more important point is to show that it is not necessary to have all manner of Orchid houses before a man embarks in Orchid growing; but, on the contrary, that a single house and a cold frame are all that are absolutely necessary for anyone who wishes to add a grace to the ordinary run of greenhouse plants. I must confess that it would be a great boon to the struggling amateur if the great nurserymen and importers could see their way to telling us briefly, when announcing an importation of new Orchids, whether these plants have been torn from tree-tops or whether they come from the crannies in the rocks; whether they come from the breezy hill-tops or from the steaming valleys; and it would indeed be satisfactory to know if they came from a dry or a wet climate, though, broadly speaking, of course we expect Orchids to have come from a damp climate. We all should benefit greatly by such knowledge, because when a man finds his plants thriving he is much more likely to buy more and increase his collection than the man whose ignorance has made him half kill the plants under his care. An evil that would, I hope, be prevented, or at least greatly lessened, by proper information is the waste—I could almost say “wicked waste”—caused by tearing away these lovely creations from their native wilds, and perhaps entirely destroying them where they once grew so abundantly, only to kill them in a foreign land; whereas, with proper knowledge and cultivation, it will be possible to say they are only transplanted, and not in any sense destroyed, so as not to rob the world of any of its bright jewels. The next condition, then, of popularising Orchids is to show they can be grown both easily and successfully. We all know that nothing succeeds like success, and if anyone can show how amateurs with small means, and possibly cramped positions, may yet enjoy a goodly harvest of beauty all the year round from their Orchids, I think it will not be long before fresh admirers will be tempted to try their hands at Orchid growing. The cultivation of cool Orchids is so well understood by all the large growers now-a-days, that it is a common sight to many of us to see these plants luxuriating by the thousand in long houses where nothing else is grown. This, unfortunately, inclines us to think they can only be grown well in this way; and what I want to-day to impress upon you is, that an amateur who has perhaps only one greenhouse and a frame may succeed in growing these cool—or, as I would rather prefer to call them to-day, “equatorial”—Orchids as well as those who have fine ranges of houses and all appliances at hand. I have too often heard it stated by successful Orchid growers that it is impossible to grow Orchids in an ordinary greenhouse; that it will be too hot and dry in summer or too cold in winter, and so on. Now I do not wish to contradict this statement exactly, because it is very nearly true; but yet I think I can suggest a plan—a very simple plan—by which cool Orchids may be grown by those who may have only one ordinary greenhouse where everyday flowers thrive. It will, of course, entail some care and some little arrangement, but I think it can be done very successfully, and great enjoyment reaped after a certain time.

About eight years ago, seized with the desire of growing cool Orchids, I bought a few dozen imported pieces and duly potted them with peat and Sphagnum and placed them in a rather close and stuffy fernery facing north. After a

year's trial I was so much disappointed at their want of progress, and the absence of vigorous growth, or any sign of flower, that I felt something must be done or my plants would dwindle to nothing; so after much cogitation and reading of any book I could get hold of which told me of the countries where these plants came from, I excavated a space under a north wall to a depth of 18 inches, and bricked and cemented the bottom and sides, so that it became watertight. Over this I placed a three-light frame, facing also to the north, and then placed my poor invalid Orchids on inverted pots standing in the water covering the bottom. This was in the end of June, when the nights were just getting mild and genial in the north of England, where the garden is situated. Before I go further I think I should explain what made me try this, as I had heard, of course, of Orchids being placed in cold frames during the summer; and yet I never found anyone who seemed very successful in consequence of so doing. Those Orchids we call cool Orchids grow at high elevations on mountains under the Equator, where there is neither any summer nor any winter season such as we have in northern latitudes; consequently they neither have summer heat nor winter cold, and in the close, damp woods where many of them thrive the atmosphere is always moist. The light is constant all the year round, there are no short, dark days and no fierce, drying sunshine or winds to blast them; yet the nights there are always cool, and the intensity of the light such and so constant, that the shade is tempered to a degree we have little idea of. It seemed to me probable, then, that if I could manage to reproduce their natural condition of moisture, air, and light sufficiently perfectly in summer they might endure our dark winter days without much loss of strength. With this idea, then, I put my Orchids into this cold frame facing north, and with an inch or two of water covering the bottom. On every still, mild night the lights were entirely drawn off, so that the plants should get all the dew and cool night air and every drop of rain that fell. On windy, dry nights the frame was closed. During the day it was aired but slightly and shaded rather heavily to prevent the sun raising the temperature much; but whenever it rained the lights were always drawn off entirely. By this means the plants in a wet summer never required any watering beyond what they received as dew and rain; they were cool and moist both by day and night, and yet had abundance of air, unless a high and drying wind prevailed; and I watched the result of my little experiment with much interest. After the first shock had passed, caused by the change from the fernery to a cold frame with the lights off at night, I saw a steady improvement set in: the young growths took new life; the old pseudo-bulbs became plump; fresh roots appeared everywhere amid the green and rampant Sphagnum, which found itself once more as if on its native heath; and by the end of September, when I took my plants again indoors, they looked as much better for the tonic open-air treatment they had enjoyed as any young party of children ever did fresh from a trip from the seaside.

Pleased as I was at the unexpectedly great success of the frame treatment, I did not put them again in the fernery facing north for the winter, but boldly placed them in a cold plant house where Roses and Azaleas thrive, and the useful and ornamental Chrysanthemum blooms in autumn, as I was so satisfied that plenty of fresh air and light had much to do with their health. I gave them an eastern aspect close to the glass and with a saucer of water beneath

each inverted pot, so that there should be no lack of air-moisture, and no need to deprive other plants of their accustomed ventilation. Here they continued to thrive until really severe weather rather checked some of them, but with the first return of spring all went well, till I had to devise canvas screens and shading to keep off the March sun and March east winds. By this means I was able to keep them in good health till the joyful time came round for turning them out again into their summer quarters. This second summer they grew away at once with increased vigour, and by the time the first chill of autumn came in September I was able to show fine spikes of bloom pushing up from really fine, strong, healthy plants. I will not weary you with more details as to potting, &c., but merely say that from that day in 1885, when I first put out these Orchids, till the extraordinarily hot and dry year of 1893 I never had a check to my success. In that exceptionally hot and dry year of 1893, when no rain fell for weeks together, and nights were as hot and as dry as the days, these Orchids did not do nearly so well as usual. A few, indeed, really suffered, showing, I think, how inferior a watering-can is to the gracious rain and dew of heaven, which are life and strength to all alpine Orchids, and a sure means of recovery to plants that have exhausted themselves by flowering. Each year I have tried some fresh species of Orchid in this frame, and generally have found it succeed. I must not forget to say that the cold plant house treatment in winter is quite as satisfactory as I could desire till March suns are blazing on the eastern glass. A north aspect with reed blinds would no doubt then be preferable, but I wish to show it is not necessary to have special houses and special aspects for these equatorial Orchids.

When I first began growing Orchids in this way I only put out into the cold frame *Odontoglossum crispum*, *O. Pescatorei*, *O. gloriosum*, *O. hebraicum*, *O. triumphans*, *O. Rossi majus*, *O. maculatum* and such intermediate forms as I possessed. I now place in the frame such as *Epidendrum vitellinum*, *Odontoglossum grande*, *Ada aurantiaca*, *Trichosma suavis*, *Cochlioda Noetziiana*, all of which enjoy their summer outing enormously, and will winter in a cold house. *Oncidium*s I find the most intractable; they enjoy the plant-house winter quarters, but do not thrive with this cold frame and open air treatment. They need, I think, more sun and air by day and a warmer night temperature than we usually enjoy in Yorkshire. For them I have thrown out a window-case opening from the plant house, always open to it and well exposed to the eastern sun. Like the frame, the bottom of this stand is cemented so as to hold water and create a moist atmosphere, in spite of the abundant ventilation in the plant house. Here a few Orchids that did not like the cooler treatment have done well, specially *Oncidium Gardneri*, *O. Forbesi*, *O. varicosum*, *O. concolor*, *O. dasystyle*, *O. cheiroporum*, *Pleione lagenaria*, *P. Wallichii*, *P. Reichenbachiana*, which thrive well under plant house conditions in winter and flower capitably in autumn. There are several others that do well with me in the ordinary plant house—*Disa grandiflora*, for instance—but I prefer to plunge it out of doors, after flowering, in a shady spot, and not bring it back till I pull it to pieces and repot the young growths in October. *Cypripedium insigne montanum* and the hybrid *C. Leeaanum* thrive extremely well under the shade of the Azaleas, and need no change of quarters all the year round. *Cattleya citrina* thrives in this same house from March to November, but it

needs a warmer and moister house in winter when it is making its growth. It should, however, be replaced in a shady nook of the cold house in March when the flower-buds are first visible, or it will be weakened for another year. There is another Orchid I would mention as enjoying summer frame treatment, which needs warm or intermediate winter quarters—that is, *Miltonia vexillaria*. I have not mentioned it before, because it will not stand really cold winter weather in the plant house, but no Orchid more thoroughly enjoys frame treatment in summer. There is one Orchid I have found absolutely intractable. This is *Oncidium crispum*, and if anyone will tell me how to keep it in good health for more than two or three years I shall be most delighted to try his plan.

I have now made out, I think, a very sufficient list of Orchids that can be well grown by those who possess one greenhouse and a frame or two, and if I can persuade anyone living in fairly pure air to try my plan I feel sure it will succeed. For those in smoky districts, where the air and rain are laden with chemical products and sooty impurities, I can only say for their consolation that *Cypripedium* seem singularly able to stand smoke, and that if *Sphagnum* will stand the sooty rain, the Orchids too will do the same. It is a curious instance of the adaptability of Nature that we should find *Sphagnum* our most valuable adjunct in growing Orchids, when it is unknown in their native habitats, and yet it is to us an almost infallible proof that conditions are favourable for our cool Orchids when it is green and flourishing. Just as when one translates a book into a foreign tongue the idea must remain the same, while the words themselves are changed, so must our Orchids have the same conditions, while their surroundings may be utterly changed. I must not forget to add that if any Orchids show bloom while in the frame I take them out when ready to expand and place them in the shadiest part of the plant house, so that the petals shall not get spotted by damp or dashed by heavy rains. In many instances I find they last longest in a sitting-room where no gas is burned at night, and I do not find the plants injured seriously when grown in this hardy fashion. An Orchid I should specially like to recommend to amateurs as suitable for an ordinary cold plant house in winter is *Disa grandiflora*. This is an Orchid that is considered difficult to grow near London, and it is, no doubt, so sensitive to smoke or any impurity in the air that only those who live in the country should attempt it. For those, however, whose gardens are in pure air, and who have plenty of soft or rain water for their plants, it is a plant that everyone who is a gardener should grow. Pot it in Fern-root and clinkers, putting each tuber against either clinkers or freestone lumps; surface with *Sphagnum* Moss or not, as you please, it is sure to do well in a cool and damp house near the glass in the winter; in the spring place it in a more shady corner, with a saucer of water beneath the inverted pot it should stand upon, and keep it syringed, well watered and free from fly or any pest till it has flowered, which should be in July or early August. Then plunge it outside under the shade of a hedge, and leave it, after once watering, to the dew and the rain. In October take up the pots, pull the young growths asunder, and start afresh for another year's round. To those who have a vinery and a tolerably warm house in which to winter their Orchids and other plants, I know of no more beautiful, lasting and delightful Orchid to grow than *Vanda cœrulea*. This too, is an Orchid

that has the reputation of being difficult to grow well and keep in health. I think, therefore, that if I state briefly the conditions under which it grows when at home, gardeners will see why they have failed so frequently. I have already mentioned how *Odontoglossums* grow under the Equator, and have spoken of the close, damp woods where they are found. *Vanda cœrulea*, on the contrary, grows on exposed hill-tops, on Oak trees, not close to the Equator, but on the verge of the Northern Tropic, and, of course, at a very considerable height, as it grows on so hardy a tree as an Oak, that is closely allied to our northern trees. What does all this mean? Surely that, in the first place, it delights in the full sweep of the wind (an exact contrast to the *Odontoglossums*); and, secondly, that it must have a winter and a summer, and therefore a wet and a dry season as well. We are told by meteorologists that when the sun is vertical—that is, straight over our heads at midday—then is always the time for those heavy rains we hear of in the Tropics; so then it follows that the summer is very wet and the winter cool and dry on the northern edge of the Tropics. The Oaks on which *Vanda cœrulea* grows are deciduous, we are told—another indication for us, if we will take the hint. Briefly, then, *Vanda cœrulea* requires plenty of moisture and abundance of air in summer, with a good canopy of leaves to shade it and keep it cool. In winter it needs all the sunshine it can get, with a dry, cool rest, close to the glass, always with as much air as can be given. Following out this idea, I have had great success the last five years with this Orchid, and I have carried out its treatment in this way. In March, when the Muscat vinery is first shut up and the Vines syringed, I put my baskets of *Vanda cœrulea* on a side shelf near the water-tank and close to the lower ventilators. Here they are treated just like the Vines, and are syringed well every day. As the sun gets hotter the Vine leaves grow, and by degrees the *Vandas* get heavily shaded; while in summer, when the Vines have abundance of air both at top and bottom, they are in a perfect gale of wind in our exposed garden when west winds are blowing. Here they flower gloriously in August, September, and October; and I much regret that my fine old specimen, that had eight long spikes on it, with flowers 5 inches across and of the loveliest shade of tender blue, is now past its best, for I had hoped to have shown it to you as the result of five years' growth. In November, when the *Chrysanthemums* are in this house, I think it wise to put the *Vandas* into more warmth till the sun is gaining new power in the first days of February. I then hang them up near the ventilators in a little span-roofed house where we grow Carnations, Geraniums, Primulas, and such plants. They are kept very dry now, having been gradually allowed to rest through the dark days; and unless they shrivel I do not give them water at all, as I find the one essential is a perfect and somewhat prolonged rest in cool, dry air. To see the way these yellow sun-burned leaves turn green and fresh, and to see the vigorous young roots push when in spring these baskets, after being resurfaced and dressed with fresh Fern root and Moss, are placed anew in the genial atmosphere of the vinery, is a delight to a gardener who likes to see his plants happy; and though I should fear "spot," which comes from damp and want of air, I do not mind a little shrivelling or yellowing of leaves in early spring, knowing well how necessary this cool, dry rest is to their well-being and free-flowering later on. I need hardly say this is especially an Orchid that

needs a pure air and a clear sky in winter. I think I have now trespassed sufficiently on your patience, and can only hope I have made myself clear enough to tempt new beginners to try these Orchids. They will inevitably try their hand at others. My experience leads me, at any rate, to this conclusion.

#### NOTES FROM A NEW ZEALAND GARDEN.

To admit that one may have too many Daffodils is to admit a great deal, and I will not be brought to the admission except it appear that my stock has reached that point when increase in quantity must be made at the expense of quality. But I have my fears. This year I have been replanting by the thousand, and my experience meanwhile has not been entirely satisfactory. Every Daffodil grower knows the pleasure of handling a fair-sized, well-ripened, and well-shaped bulb, brown, firm, and silky like an Onion. For my own part my pleasure in the bulb is little less than my enjoyment of the flower. But little of that pleasure have I had this year, though I have planted so extensively. In the case of some varieties, though the bulbs are fairly large and healthy, they have, from overcrowding, become laterally compressed in a way no grower of Daffodils can approve, whilst the outer skin has not the silky brown gloss that the epidermis of a perfect bulb ought to have. *Empress* has, I think, under any conditions of growth an ugly bulb in contrast with the fine, large, smooth-skinned bulb of *Emperor*. I have more than once remarked the difficulty of distinguishing *Empress* from *Horsfieldi*, and I have pointed out in former notes that they are distinguishable by their relative seed-bearing qualities, *Empress* being almost or entirely sterile, and *Horsfieldi* fairly fertile. I notice also that they differ markedly in the shape of their bulbs, that of *Horsfieldi* being flatter and fatter of the two.

As to the multiplying of varieties, I am entirely convinced that the number is already too large; and each season I resolve to extend my list no further, but each season when the new catalogues come in my good resolutions go to the wall.

Writing of varieties, I am taken back across the years to a garden that knew no more than three varieties of *Narcissus*, and yet the Daffodil show of that old garden in the early days of April was not contemptible. It was a disgracefully utilitarian garden, and shockingly geometrical in design; a square of perhaps a couple of acres in extent. There was nothing about it that a modern aesthete would call picturesque, except perhaps its mortarless wall which so completely shut it in, that no glimpse of the inside was possible except through the pickets of the gate. The wall had originally been finished off with a thick coping of turf, and this in time had mellowed into loam, giving foothold to various kinds of waving Grasses, to patches of the common, but beautiful yellow-spored *Polypody* and rosettes of *Houseleek*.

I find it hard to believe that there exists now anywhere on earth a place so rich in wild flowers as the country-side in which that garden lay. It was one of those sub-alpine regions where you stand on the border-land, as it were, between the loveliness of the fertile lowlands and the stern loneliness of the granite hills. A walk of an hour or so would take you into a wilderness of heather, where in the peat-bogs you might find Bog Myrtle and Cotton Grass, Sundews and Butter-worts and *Sphagnum* Moss of all shades, green, yellow, pink and crimson. In the near neighbourhood of the garden the

most common weeds were lovely flowers—wild Thyme, Dandel, Brooklime, Bird's-foot Lotus, Harbell, Meadow-sweet, and so on. In the woods that lay around and by the mountain stream a stone-throw from the gate you might walk ankle-deep in Woodruff, Wood Anemone, and Marsh Marigold, knee-deep in Wood Hyacinths, thigh-deep in Lady Fern, and over the head in Foxglove, Bracken, and wild Raspberry. A few minutes would take you to the shady home of the *Trientalis europea*, Lily of the Valley, Oak Fern and Beech Fern, *Cystopteris fragilis* and *Asplenium nigrum*, *A. viride* and *A. Trichomanes*. Take a short walk in one direction and you might gather sheaves of Bog Iris; the same distance in another would bring you to the habitat of the fringed Bog Bean, rare of blossom. In autumn if you looked toward the hills they were purple with Heather, if toward the woods they were scarlet with the Mountain Ash (locally, "rodding"). As for Gorse and Broom, Dog Roses and Sweet Brier, Ivy, Bird Cherry and wild Cherry, they were abundant and glorious.

And yet in this richly-endowed district Nature had made strange omissions. Primroses there were in plenty, enough to make the air smell faint. But the Cowslip, which decks the English meadows with delight, was wanting. No child in that locality ever tasted Cowslip wine or threw a Cowslip ball. Nor were there sweet Violets beneath the hedges, though there were myriads of the scentless lilac kind, which we called the "Cuckoo Flower," because bird and blossom came at the same time; nor Meadow Saffron, nor Snowdrops, though there was a wood not ten miles away where they were as Grass; nor Hart's-tongue Fern, except in one hidden spot where those in the secret could get it by risking their necks, nor wild Narcissus of any kind.

Our forest trees may not have been so remarkable as our wild flowers; and yet, on second thoughts, I think they were. The finest autumn display of fireworks was made by a slope of Beeches that burned themselves away through a scale of brilliant colour into the light leather-brown of their winter leaves; and the same slope was just as beautiful in spring, as may be conceived, for what is more exquisitely delicate than the young foliage of the Beech? unless it be the young foliage of the Oak, a green with a yellow in it, seen in nothing else that I remember, except the Oak Fern, whence I take it this last has its name. Then there was the "Big Beech" covering who knows what area and giving shelter in its time to countless generations of children who played under its branches and fattened on its mast. The Beech accumulates its hardwood but slowly, and this particular Behemoth must have been centuries old. As for our Oaks, there are no doubt older, larger, and mossier Oaks elsewhere, but ours were old and large enough for me. Then there were hoary Spruces, the abode and breeding place of squirrels, miles of Larch, with its green and crimson tassels, sweetest of all the conifers, and each Larch seemed to have its chaffinch; silver Birches by every stream, Hollies too heavily berried for the birds to make an impression, cathedrals of Scotch Firs, coverts of Hazel, Ivy, the small-leaved wild kind everywhere; tangles of Honeysuckle and occasional colonies of Sloe or White Thorn. Further, these woods provided that without which no wood is perfect—solitude. You might wander through them a summer's day and meet none of your own species, nothing but harmless *ferre nature*, a pair of cushat doves or so, an occasional roe or squirrel, a pair of wood wrens or some small deer.

In this country lay the first Daffodil garden I knew—the appurtenance to an old, stone, Ivy-covered farmhouse, roofed atop with lichened slates, under which stray swarms of bees found harbourage; a utilitarian garden where flower, fruit, and vegetable grew in beauty side by side. A geometrical garden also, not that there were elaborate mathematical devices filled with the primary colours; curves there were none, the people who walked in that garden always taking the shortest distance between two points. Even the gardener who was put there to dress it and to keep it did his work in a toying, amateurish way, as if he were the garden's leisurely owner and no hired servant. The garden plan was simplicity itself—a broad grass walk forming a square, whose sides were parallel with the wall, and two broader grass walks dividing the first square into four shorter; along the sides of the walks, flowers, Gooseberry bushes and standard fruit trees; inside these, vegetables. The Gooseberries, as I remember them, were the sweetest in the world, the Apples the sourest. As for Pears and Plums they were a mockery, except for blossom, and that was splendid. The Apples (many of them) were little better than Crabs, but in blossom-time they were as fine as the best golden Pippins—finer indeed, for the blossom of the golden Pippin, I understand, is a trifle pale, whereas those sour, old Moss-covered Apple trees were hidden every spring in blossom, exquisitely flushed with pink, and some varieties were sweet and mellow even in the fruits: the small yellow, cracked Oslin, for instance, and the oval, brown-cheeked Jenny Sinclair. The Cherries were famous—blossom and fruit, more particularly one large wild Cherry tree, locally called by the French name *guigne*, which in spring, when it was a sheet of blossom, was the haunt of the cuckoo; and in autumn, when its branches were red with fruit, haunted by blackbirds and by other bipeds of a lighter colour. The Walnut trees on each side of the gate bore beautiful large Nuts with nothing in them, but Bacon must have had their leaves in his mind when he said that "certainly virtue is like precious odours—most fragrant when they are incensed or crushed."

As for flowers, they were not very numerous, or very various, or particularly choice. They were of the robust kind that, once planted, can hold their own; and yet they were sweet enough. There were bunches of Auriculas, black, snuff-brown, and yellow, which were seldom, if ever, transplanted; more particularly there were frequent bunches of an early Auricula that came with the Primrose—pale lilac, sweet-smelling, smooth-leaved and dustless. I believe it must have been the original alpine species, and I desire it now more than the finest green or grey-edged. Cabbage Roses were plentiful, feeble as to stem and foliage, but large and plethoric as to their flowers. "Cabbage" Roses, indeed! There were also crimson Damask Roses, long and filbert-shaped in the bud, and semi-double in the exposed state; also streaked York and Lancaster; also a white full-petalled summer Rose, which grew almost to a tree, sweetest of Roses for fragrance—*Rosa alba*, I suppose. There were purple Delphiniums and blue-veined Aconites—"Monks-hood," as we called it, or sometimes "Priests' Poison." There were Balm of Gilead, Rose of Sharon, Lily of the Valley, and no doubt other things known to Solomon; Hepatica and the blue Navelwort; Spiræas, Gardeners' Garters, the purple Flower-de-Luce, and Southernwood; on the summer house, Ivy, Traveller's Joy, yellow Corchorus, the larger Bindweed, and flowering Currant, the double red (which, strange to say, bore berries) and the single white. The

Lilac trees seemed to grow out of the stone wall, but their trusses of flower showed that they did not want for a good root-run.

Seeing that I began with Daffodils, all this may seem, as the French would say, "*apropos* of boots," but, in the manner of a *rondeau*, I return to my initial theme. Every year the garden had its "spring cleaning," so that by the 1st of April everything was spic and span—all dead matter removed, Raspberry canes and Gooseberry bushes severely trimmed, and the soil delved and raked. At this particular juncture the Daffodils availed themselves to come out in bunches innumerable, regularly marshalled like an army, and therefore somewhat formal in arrangement, but all the better suited to the style of the garden, which affected straight lines. With all my varieties of Daffodil and various styles of planting, I am afraid I have never produced any more telling effect than was seen every spring in that homely garden. Perhaps it is that bygone joys loom large through the mist of memory. Too well

I know, where'r I go,

That there hath passed away a glory from the earth.

But still I know also that the fairness of that garden was not altogether in the youth of the eyes that saw it. Yet it possessed only three varieties of Narcissus—a medium-sized Non-such Daffodil, *Narcissus odoratus*, and a *Narcissus poeticus*, which came a few days later than the Daffodil—ornatus, I should think, from its earliness. Nor was there any transplanting or thinning for twenty years at least, except perhaps when bulbs were given away. In my garden no Narcissus known to me would remain satisfied with this treatment. The bulbs would crowd and jostle each other, and ultimately the blooms would deteriorate. But that old garden had a light pebbly soil resting on a gravelly bottom; whereas my garden has a somewhat heavy loam resting on hard clay, and this may make the difference. However that may be, the multiplication of varieties becoming a matter for serious consideration.

A. W.

**Rosa indica.**—Perhaps one of the choicest of the wild Roses grown in gardens is this species, and it is one that many would cherish if only for the fact that it is one of the parents of the loveliest race of Roses, the Teas. But it appeals to us through its beauty, and a little bed of it at Kew is gay with many flowers, which are of a bright self-erimson colour and borne in clusters. It is one of the few species that bloom continuously, and although not so robust as most of its kindred, merits a favourable position and amply repays any extra care bestowed upon it.

**Epigæa repens.**—Being a great admirer of our Mayflower (*Epigæa repens*), I was interested in a recent GARDEN note which alluded to the lack of interest shown in its garden cultivation, speaking of it as "really too sweet a subject to be neglected." While I fully agree with this sentiment, experience has taught me that this charming and modest little wildling is one of the most difficult of all forest plants to grow successfully in the garden. Indeed, I have yet to see a single instance in which its obstinate wild wood nature was sufficiently subdued to make it succeed at all away from its habitat even under the greatest care in providing the most suitable conditions. Your writer speaks of the plant thriving best on an eastern aspect, which surprises me, because when I find it in this region it is always on a western slope or exposure, and usually on high ground where moisture can rarely accumulate. There is evidently very much for us to learn yet in regard to the requirements of this lovely little plant. But possibly if we knew it all we might not admire and appreciate it half as well.—H. HENDRICKS, Kingston, N. Y.

OFFINGTON.

THIS picturesque house and most interesting garden are only a short distance from Worthing. The visitor receives a pleasing impression the moment he sees the entrance lodge, which, embowered in creepers, is characteristically English; whilst native trees—notably the Scotch Fir on either side of the pleasant drive that leads to the house—are expressive of the most beautiful surroundings of an English home, compared with which the exotic conifers that so many plants are a poor substitute. In the garden itself Major Gaisford has gathered together, and grouped and arranged in an artistic manner, a perfect host of rare and beautiful trees, shrubs and plants which, favoured by a genial climate, give to the garden a distinctive aspect of its own. There is here an entire absence of that conventional, formal gardening which cuts up the pleasant turf, lays down hard, geometric patterns where we should see the free and graceful forms of choice shrubs and noble flowers massed

seeing it in flower some years ago. *Cesalpinia japonica* has survived in an exposed position, although moved last December. *Iris Lorteti* and *Eremurus robustus* are flowering well this year, and a plant of *Ostrowskia magnifica* has eight flowers on one spike, and they are all pure white.

*Abutilon vitifolium* does well here, and also the purple var. It stands all weathers and the flowers last for nearly two months. *Photinia serrulata*, twenty years old, bloomed strongly last year. We have never before seen it in flower in England in the open. *Pourthia villosa* (*Photinia*) is a beautiful shrub that does not appear in catalogues. It makes a mass of bloom in April 4 feet high. The leaves turn bright red in autumn. Veitch's hybrid *Phallageria* flowered here in the open border in 1893. The flowers are poor in colour and inferior to those of both of its parents, *Philesia* and *Lapageria*. The Burmese *Rosa gigantea* has run up to 15 feet, but has not flowered as yet. *Eupatorium Wit-*

at their first flowering produced salmon-coloured blossoms, but which subsequently bore flowers possessing the natural brilliant hue. The finest specimens of *Vallota* that have ever come under my notice have been grown in the windows of cottages and farmhouses, which situation and form of culture would seem admirably adapted to the requirements of the plants, inducing vigorous growth and free-flowering that must be seen to be credited.—S. W. F.

FLOWER GARDEN.

LILIUM ELEGANS.

THIS Lily, recently illustrated in THE GARDEN, is particularly remarkable for the great difference that exists between the several varieties in colour, height of the plant, and season of blooming. One variety is among the earliest of all Lilies to bloom in the open ground, for its blossoms follow closely on those of the greenish yellow *L. pyrenaicum*, which has been for some years the first member of the genus to flower. The variety referred to is a strong growing form that will reach a height of 18 inches to 2 feet, with large orange coloured flowers, irregularly shaded with red, and thickly dotted with brown. It is especially noticeable when growing, by reason of the young leaves and flower-buds being clothed with a whitish down, which to a great extent disappears before the blossoms expand. This Lily is very liberally treated in the matter of names, for it is known as *marmoratum aureum*, *robustum*, and *guttatum*. It is certainly a very distinct and striking form, valuable, too, from its earliness. Before the blossoms of this are faded away several other members of the *elegans* group are expanded, the first this year being *Prince of Orange*, one of the dwarfest of all Lilies, with pleasing yellow blossoms.

Quite a month later than the forms above mentioned is the variety *venustum* or *armeniacum*, whose flowers are of a pure unspotted apricot tint, very like those of the Japanese *L. Batemannii*. Widely as the varieties differ from each other in their season of blooming, they vary even more in the colour of their blossoms, ranging as they do from the pale buff-yellow of *alutaceum* and the somewhat richer tinted *Prince of Orange* to the deep blackish crimson of *hamatochromum*, *erucantum*, or *Horsmanni*, for it is known under all three of these names. Of flowers intermediate in colour between these two extremes we have *Alice Wilson*, rich yellow with a reddish shade, illustrated in THE GARDEN, November 8, 1890. Though it has been grown for some years this variety is still scarce and comparatively dear. On the same coloured plate with *Alice Wilson* was the form *Van Houttei*, one of the best of the bright crimson flowers. A very distinct variety in all stages of growth is *brevifolium*, with short, very dark green leaves and flowers of a kind of reddish salmon tint. This is one of the tallest varieties that we have, for it will reach a height of a couple of feet, while the little buff-coloured *alutaceum* is only about 6 inches high. From this it will be seen that the difference in height between the several varieties is also very marked. Besides all this, *L. elegans* is remarkable from the fact that



Offington House, Worthing. Engraved for THE GARDEN from a photograph sent by Miss Gaisford.

and blended. The large illustration shows the house nearly hidden by climbing plants and a grand old Ivy-embowered Walnut standing on a fine expanse of lawn. Beside the walk are large beds where the best hardy flowers have an opportunity to prove how much beauty they can impart to the garden where the plan of arrangement is large and simple in design. The smaller view shows the house from the flower garden, and the luxuriance of growth so early as Iris time is a remarkable contrast to the nakedness of most flower gardens at this period, when they are waiting to receive their summer occupants. Of the many plant treasures that are cherished here we need not now speak, as a good account of them may be found in THE GARDEN of July 13, 1889. Major Gaisford (writing to us recently) says now that the evidence of injury from the past winter is practically complete, he is surprised to find how few of the tender things are quite dead. Although many risky plants are grown, the actual losses do not number more than about 2 per cent. out of a total of nearly 700. The greatest loss is a *Fremontia californica*, which was on a west wall, where we remember

*mannianum* has lived in the open border for some five years, and the photo (of which an engraving appeared in THE GARDEN last week) shows it in bloom about Christmas Day last year. It is a South American shrub and was turned out of the greenhouse, being too large. *Cassia corymbosa* was in full bloom on a south wall till frost came, and *Physianthus albens* after two winters' frost has borne seed.

**Vallota purpurea.**—Most bulbs imported from the Cape flower during their first season in the spring, this being their time of blossoming in their native habitat. After a season or two, however, they flower at the same time as English-grown bulbs. I have a very beautiful variety of *Amaryllis belladonna*, which I brought back from the Cape, that flowered first during the month of March and on the second occasion in June, since when it has invariably bloomed in September. All the plants of *Vallota purpurea* that I have seen growing wild, and I have seen some thousands, carried blossoms of a vivid red, and I believe that the pale tinted blooms referred to on p. 414 as occurring occasionally in the case of imported bulbs are merely consequent on debility. I have had bulbs which

one of the varieties has double blossoms, which are not at all numerous in this genus. The varietal names of staminosum and flore-pleno have been applied to this double-flowered form. The petals of this are deep red, arranged in a cup-like manner, the interior of which is filled with flattened staminoïd segments, which give the flower a very singular appearance. Another double-flowered Lily (*Lilium tigrinum flore-pleno*) is in the duplex character of its blossoms totally distinct from the preceding. The flowers of this double variety of the Tiger Lily are composed of an extra number of petals, arranged in a regular manner so as to form a symmetrical shaped bloom. Of other Lilies, double blossoms are occasionally borne by the Japanese *L. auratum*, but this variety after the first season generally reverts to the normal form. A double variety of the Martagon Lily was at one time in cultivation, but I have not now seen it for some years. That form of the Madonna Lily (*candidum*) met with sometimes as flore-pleno and at others as monstrosum is a poor garden plant and at best only a curiosity. In this the petals are to a great extent suppressed, the entire head of bloom consisting of small bracts and petaloïd segments. When speaking of *L. elegans* I should have mentioned that it is frequently met with under the specific name of *Thunbergianum*.

T.

## NOTES FROM OAKWOOD.

RHEUM MOORCOFTIANUM is a distinct and rather attractive species of this family. It is dwarf, the flowers being arranged in a dense spike. Those who admire hardy fine-leaved plants should make note of this. *Pinguicula grandiflora* and *vulgaris* are quite at home in a rather damp place. Although of such small proportions, the lovely Lobelia-like blue of the flowers renders them quite ornamental. They have a very pretty appearance growing in this natural way. *Andromeda fastigiata* is a success growing in company with its near relative, *A. tetragona*. These little *Andromedas* are remarkably quaint-looking and worthy of a place where the necessary conditions can be secured them. *Lithospermum Gastoni* is doing well, as is also *Omphalodes Lucilia*, the bright Forget-me-not hue of which is very taking. It is growing on a mound where the drainage is very free. If this were as easy of culture as many of our spring flowers are, how valuable it would be. One can easily imagine the effect of a mass of it in full bloom. *Coronilla iberica* is a showy little thing, carpeting the ground with deep green foliage, which is thickly studded with bright yellow blossoms. It produces a nice effect in a somewhat elevated position. *Choisya ternata* was laden with its fragrant blooms. It is a charming thing for the open air, perfectly hardy, much more so apparently than many things reputed more so. Hundreds of blooms of *Aponogeton distachyon* were open in a shallow pond. The Cape Pondweed thrives like a weed at Wisley; in company with it are *Caltha palustris fl.-pl.*, the large, double, bright yellow flowers embellishing the water margin; and I was pleased to see our native Bog Bean (*Menyanthes*) occupying an honourable place. Seen in the form of a good-sized colony it is decidedly ornamental, quite as worthy of a place in gardens as many exotics. *Cornus canadensis* is worthy of a note. It carpets the ground in the same manner as the weed *Anemone*. The little Foam Flower, spreading widely in a sheltered spot, was very pretty.

J. C. B.

**Alstroemerias.**—I noticed the other day some of these beautiful flowers growing in a sloping bed of light and shaly soil that in strength surpassed any that I had before seen. The tallest plant was considerably over 3 feet in height and others were nearly as tall. The many-tinted, delicately-coloured blossoms were just expanding in hundreds and the foliage was dark and abundant. The plants in question had been raised from seed which had been sown in the bed seven years previously, since which time the seedlings had not been touched. Plants were coming up here and there in

the hard gravel path that bordered the bed and also between the interstices of the steps that led down by its side. In my own garden in heavy soil I find them quite hardy, though, having planted the tubers 3 inches instead of 6 inches deep as recommended, I was prepared to lose many during the last winter, and was agreeably surprised to find them this spring none the worse for the damp and cold they had experienced. Still I should imagine that a light soil is capable of bringing *Alstroemerias* to the greatest perfection, and that the plan of sowing the seed in the bed that is to contain the plants is preferable to planting the tubers.—S. W. F., *Torquay*.

**Iris stylosa.**—This lovely Iris, which is invaluable for the scented blue flowers that it produces through the depth of winter, is not always happy in its surroundings. I know several gardens where it merely exists, never flowers, and dwindles rather than increases. I saw last week an enormous clump of this Iris fully 3 feet through growing on a steep slope of light soil facing south, where it seemed perfectly at home. This clump, I was told, flowers very freely, and had been divided many times. In the neighbourhood of Algiers, where this Iris grows wild, it is found on dry hills and beneath the shade of sloping woods, while *I. reticulata*, which also abounds there, loves the neighbourhood of stream and pool. *I. stylosa* should, to be seen at its best, have light soil and be planted on a slope with a certain amount of protection from piercing winds.—S. W. F.

**Sedum spathulifolium.**—This excellent rock plant is a native of North America, and though easy to grow is by no means common. Several plants now in bloom look very effective. The leaves (as the name implies) are spatulate, and although of a fleshy nature, the plants have stood the test of the last severe winter. The leaves are glaucous in colour and are arranged in rosettes; the plant is only a few inches high and of very neat habit; the flowers are bright yellow and appear in loose cymes. Like most *Sedums*, it seems to thrive best in a sunny position.—F. W. M.

## NOTES ON HARDY PLANTS.

**Lewisia rediviva.**—What a fascination to see a number of these flowers open suddenly some June morning as soon as the first glint of sunshine reaches the plants. Last night, as for days before, I had, of course, seen the swelling buds, which in their peculiar fashion rested on their sides on the ground, but for anything I could know they might have gone on days longer, but this morning with a wonderful unison half-a-dozen plants, without any warning that the observer could read, burst their bulky buds and let loose the compressed satiny petals, displaying them in all their exquisite beauty of tints, ranging from paper-white, blush-white, pink, and salmon-pink, and in all cases glistening like glass. The flowers close daily about two o'clock, but for four or seven days they may be seen, preferably in the morning hours; by the time the flowers have done the plant will have shrivelled up to the merest threads, which you might not have seen had you not known that something had existed there but a few hours before. We see this native of the Rocky Mountains is most aptly named *rediviva*, or the Resurrection Plant. It puts on its most beautiful dress as it disappears, not to show itself again until September or October in the form of bristling tufts of succulent grass, and in such state more or less visible all winter.

**Campanula patula (L.).**—I believe this is given by different authorities as of biennial and perennial duration. Anyhow, its pleasing variability and big pendent bells laxly borne on many-branched stems and lasting for weeks make the plant worth a place. The plants I have in mind are from seed brought by a lady from Wildbad. I see the same plants which flowered last autumn are again in bloom. I never saw a British form so attractive as this; still one hardly knows what our native plants are capable of as decorative flowers until they are

well cultivated. I never was more struck with this fact than in the case of masses of *C. rotundifolia*. I only hope *C. patula* may prove perennial, but if it does not it seeds freely, only tree-seeders and self-sowers come where they are not wished as practically to constitute themselves weeds.

**Hypericum aureum.**—This is, I believe, a new plant, and the name may seem a poor one for a *Hypericum*, the essential colour of whose species is yellow; but here the colour may be said to have special reference to the margins of the leaves, which are golden, and also to the deeper yellow of the stamens in relation to the other parts of the flower, and this is all the more remarkable when we see the splendid massive stamens constitute the chief part of the flowers. The petals are comparatively small, hence the distinct aspect of this species. I find it most reliably hardy, and it vies with the kind called *H. Moserianum tricolor* for bright foliage colouring in the autumn.

**Cytisus schipkænsis.**—I spoke of this last year, basing my remarks on a specimen flowered in the cool greenhouse. I have now to speak of a specimen grown in the open air and stood out-of-doors without any protection all last severe winter. Moreover, my present specimen is on its own roots (not a worked plant) and it gives a totally different idea of its habit, which is prostrate or procumbent; even strong branches rest flatly on the earth. It is now in flower—how lovely and how distinct! The flowers are large, white and arranged in terminal tufts on the ends of all the short twigs. Beyond all doubt this is a shrubby species of the first order for culture in the rock garden.

J. Wood.

*Woodville, Kirkstall.*

## FLOWER GARDEN NOTES.

**PINKS.**—Cuttings of these may be put in as the different varieties go out of flower if it is desirable to increase the stock, and a bed may be prepared at once for them. As previously noted, I am inclined to prefer a bed in an extemporised frame, where they may be shaded for a time if necessary or get the benefit of all the sunshine available should the weather prove dull and showery for some time after their insertion. Soil turned out from pot, pan, and box at the time of planting out summer bedding stuff will do very well for the cuttings of Pinks, Violas, and alpine Phloxes, later on for *Antirrhinums*, *Pentstemons*, the *suffruticosa* and *decussata* section of *Phloxes* as well as for layering a few special Carnations that are likely to be required for pot work. As this soil, if lying in a heap fully exposed to the sun, will probably be very dry, it should receive a good soaking of water after levelling down the day before the cuttings are inserted, previously adding a little fresh leaf soil and sand and incorporating the same with the old potting soil. Some 4 inches of soil resting on a hard bottom are much better for cuttings of all the above plants than to allow a considerable depth; under the latter conditions the roots will ramble far afield and the plants suffer proportionately when they are lifted for removal to other quarters. With Pinks may be planted the large-flowered single *Begonias* (the crimson, scarlet and pink shades). The flowers of the Pinks will be over before the *Begonias* are at their best, but the foliage will form an admirable carpet for the large drooping flowers.

**MARGUERITES.**—In the note on "Flowers at Gunnersbury House" I see the statement made that Mr. Hudson keeps the leaf-boring maggot, so detrimental to the preservation of clean, healthy foliage on the large-leaved *Marguerites*, in check by the aid of Richards' vaporiser. Does this mean oft-repeated doses to ward off the attack of the fly, or that the maggot itself once established is destroyed by the vaporiser? I have been led to the query because the large-flowered varieties, both white and yellow, used to enter rather largely into vase and window-box arrangements, but I was obliged to discard them, as long before the end of the season the foliage presented a most



unsightly appearance. The small-leaved variety is not so susceptible to the attack of the maggot, and is used for the centre of vases or as a back row for boxes, edged with a nicely contrasting trailing plant, as Fireball *Tropeolum*, Mme. Thibaut Ivy-leaved *Pelargonium* or the trailing blue *Campanula*. For large vases or boxes, alternate plants of a dark *Fuchsia*, such as *Abundance*, may be associated with the *Marguerites*. I notice complaints respecting the very indifferent appearance of the autumn-flowering perennial *Marguerite*, *Chrysanthemum maximum*. It wants annual removal; at least, this is my experience with it on a light, dry soil. The old stools should be lifted clean out at the end of each flowering season, and the strongest bits selected and replanted, doing them thoroughly well. Writing of *Chrysanthemums* reminds one that where clumps or beds of the summer-flowering varieties, whether pompon or Japanese, were planted, they are likely to want a little attention, if the hot, dry weather continues, in the shape of a mulching of good manure and a thorough soaking of water. I should like to extend this soaking so that it includes the whole of our herbaceous borders. The ground is getting very dry, and all plants, especially moisture-loving subjects, are beginning to look the worse for the drying out at the root and the daily strain imposed by a hot sun. I am glad to note the appearance of shoots—weak numerically and lacking vigour, but, nevertheless, very welcome—on our big stools of hardy *Fuchsias*, that have been in their present quarters many years, and which I thought had succumbed to the exceptional cold of last February. I shall run no risk again, but mulch the stools heavily at the approach of winter. Nearly all the *Gypsophila* is also on the move, and as there will be a considerable difference in the time of flowering between the early and late clumps, the season will be proportionately extended. This is getting a very familiar plant. At the majority of summer shows it enters very largely into nearly all arrangements of cut flowers.

**FLOWERING SHRUBS.**—The best season of the pleasure grounds—so far as a blaze of colour is concerned—has departed with the decline of *Azaleas* and *Rhododendrons*, which had in their turn followed hard in the wake of the displays furnished by *Ribes*, *Forsythias* and *Weigelas*, but there are some interesting things still in flower. *Chionanthus virginicus* is one of the most delicately beautiful things we have in hardy shrubs, and with not too bright or prolonged sunshine lasts in flower a long time. Now that its value as a forced shrub has been demonstrated it should find its way into many large conservatories early in the season, and from thence be consigned to the shrubby border. *Colutea arborescens* is a shrub not widely known. It is seen to advantage just at present in a large border formed at the end of one of the lawns, backed by a nice clump of *Prunus Pissardi*, the latter flanked by two large *Spiraea arifolia*. Nice sprays of the highly-coloured *Prunus* are very acceptable in a cut state to mix with small branches of the *Colutea* with *Kerrias* or flowers of similar hue. A novelty in flower just at present is *Asimina triloba*. By no stretch of the imagination could it be pronounced beautiful, but it is a very remarkable flower both in shape and colour. I noticed several flowers this year of a very intense hue, the shade apparently varying as one turned the flower from side to side, and going off almost to the shade of gold towards the centre. Perhaps the finest object in the shrubberies just at present is the double form of *Deutzia scabra*. I have had occasion before to draw attention to the exceptional beauty of this shrub, and this year all the plants are simply a mass of flower. This, when one gets plants some 9 feet high by as much in width naturally means a very beautiful display, and if one can manage to get something planted fairly close to the shrub that will contrast nicely with it, such, for instance, as *Delphiniums* or *Larkspurs*, the effect is very pleasing. The value of this shrub is enhanced from the fact that, like the varieties of *Ribes* referred to in a previous note, it can be very readily increased from cuttings,

really nice little bushes being furnished by this means in a couple of seasons. The value of the white and rose-coloured double forms of the common *Bramble* for certain positions in the wild garden is now generally known, and one often comes across clumps in situations for which they are admirably adapted and which could hardly be filled more satisfactorily by any other plant. Like another trailing plant—the *Ivy*—these *Brambles* will accommodate themselves to almost any description of soil, although they are seen at their best in deep, rather holding ground, a remark equally true of the common *Blackberry*.

**DAFFODILS.**—Where these are naturalised in pleasure grounds the foliage will be found to have come to an early—it is to be hoped not premature—decay, and if in spots where it and the *Grass* growing somewhat long amongst is apt to be objectionable, there will be no harm now in running

exceptionally severe one, but the *Lobelias*, which remained totally unprotected in the open bed, came through the ordeal scathless. I am convinced that in some gardens the plants may be left out with impunity, while in others, do what you will, it seems well-nigh impossible to keep up a stock. I speak feelingly as to the latter phase, as formerly in a sheltered garden with light soil I could not induce the plants to survive the winter in the open. I would advise growers of these *Lobelias* to try the various methods recommended for preserving their stocks, viz., leaving the plants undisturbed where they have flowered and protecting with a light mulching—leaving them in the same manner, but without protection—lifting the clumps, storing in cold frames, and dividing in the spring—dividing in the autumn, growing on in single pots in heat until well started, and then placing in a cool greenhouse:

they will then soon discover which process is the most successful in their locality, and can adhere to that.—*S. W. F., Torquay.*

**Sedum kantschatcicum.**—Though introduced from Northern Asia many years ago, this handsome rock plant is not seen in gardens as often as it deserves to be. It is now in full bloom. The flower-stems are semi-prostrate, bearing an umbellate cyme (4 inches or 5 inches across) of bright yellow flowers with orange-coloured anthers. The individual flowers are not much more than half an inch in diameter, but being combined into a large cyme they are very effective. The plant is very easily grown and should be in every rock garden.—*F. W. M.*

**Propagating Pinks.**—The season of flowering of these charming as well as useful and in many instances sweetly fragrant flowers will soon be over, and as soon as the blooms are past, preparations may be made for increasing the stock. Many who grow these plants largely rely in the main on division of the roots later in the year, and particularly so of the commoner kinds. Divided plants flower quite freely, it is true, though the individual flowers are smaller than those borne on plants



The flower garden at Offington. Engraved for THE GARDEN from a photograph sent by Miss Gaisford.

the scythe over it and clearing away. I have mentioned the *Daffodils* because if it is deemed advisable to extend their naturalisation, a decision must be come to ere long as to the varieties to be introduced and the most suitable sites; also if they are likely to be required for cutting, to so choose the sorts as to provide a season at once lengthy and well sustained. *E. BURRELL.*

*Claremont.*

**Herbaceous Lobelias.**—Referring to the subject of wintering herbaceous *Lobelias*, anent which eight notes appeared in vol. xlvii. of THE GARDEN, I may state that the plan of leaving them untouched in the open border has again answered admirably. Not one of the clumps is dead, but all are throwing up strong growths. As I pointed out (p. 529, vol. xlvii.), only one of the many writers who took part in the discussion advocated leaving the plants *in situ*, and that one recommended protection during the winter in the form of a few inches of *Fern* or rough leaf soil. The soil here is heavy and the winter has been an

from cuttings. Stock raised in the latter way is generally marked by increased vigour together with a compactness of the tufts not usually to be found in divided plants. Few plants are more easy of increase by cuttings, and the flowering over, plenty of material will be obtainable, so the work may be taken in hand at once. The simplest and safest way to ensure success is to strip the shoots from the tufts with a heel attached, and without further preparation or ado, insert them firmly in sandy soil. Where only a few dozen are needed a shady corner will suit them well, but if a quantity is required it will be best to give the cuttings the protection of some lights. Covered by these and shaded rather lightly, the cuttings, if kept moist, will root in about three or four weeks. During this period they must not be kept too close or too wet. I prefer when watering the cuttings while in frames to apply the water overnight, giving a good soaking, and allow the lights to remain off all night, replacing them about 8 a.m. the following day. Treated in this way the losses are very few. When inserting the cuttings

a fair amount of room should be given so as to permit of growth. Better still if as soon as rooted the young plants be transplanted into small nursery beds in good soil 6 inches apart each way, as by so doing fine bushy little tufts will result in a very short time. The young plants prepared in this way make nice presentable subjects for sale, while for potting up in early autumn preparatory to forcing they are all that could be desired, and in every way more satisfactory than divided plants. The side shoots are earlier produced by removing the central growth when the plant is established.—E. J.

## KITCHEN GARDEN.

### THE EXHIBITION STATUS OF THE TOMATO.

DOUBTLESS to many it may be thought strange that any dispute should take place over the status of the Tomato. To them the question is one they have settled for themselves. Given only plenty of Tomatoes, and they are eaten ripe and uncooked with the same avidity that they are partaken of cooked. Were the Tomato essentially a sweet fruit such as is the bulk of what we term dessert fruits, it is doubtful whether it would be so generally acceptable in its various cooked forms as it now is, yet the absence of that sweetness and flavour peculiar to most dessert fruits in no way detracts from its consumption in a ripe, uncooked state: indeed, there can be no doubt but that such consumption is rapidly increasing. Ordinarily, this beautiful, if not delicious, fruit is classed as a vegetable. It is the victim to some extent of indifferent origin and gradual development. Starting with very indifferent examples that were not at all attractive uncooked, naturally the Tomato fell into the vegetable groove or rut. It was regarded only as a sauce product or an ordinary vegetable accessory to dinners, and hence its long recognised vegetable status. Its next development might be said to have been found in its exaltation to a very pleasant salad element—for Tomatoes have been for some time identified with salading—and to-day form a common feature or accompaniment. Still, this latter association only helped to retain the Tomato amongst vegetables. During the past few years, however, it is most obvious that these fruits have taken a higher position. The world has so far recognised their excellences in a ripe raw condition, that they are consumed largely in that condition as ordinary accompaniments to meals, and even partaken of as refreshment at odd times.

It is this development of a most interesting and beautiful garden product that has caused the dispute as to the exhibition status of the Tomato to arise. It is a question much more easily raised than satisfactorily settled. Apart from their undesirability for ordinary sale, there seems to be no limit to the size to which Tomatoes may be grown for cooking, provided the fruits are firm, fresh and of good form. But fruits of these huge dimensions are very objectionable for consumption at meals in a ripe and uncooked state. To meet this latter requirement we have produced in great abundance small fruited sorts of various shapes and colours most of which are singularly adapted for dessert use, but would be almost useless for cooking. Naturally, even in connection with large-fruited sorts, a line is drawn when forms of consumption differ. The largest and most ungainly go to the kitchen, the small and handsome fruits to the table direct, and in this way again the status of the Tomato is clearly shown. Practically we cannot get away from the fact that, having regard to its peculiar nature, a fruit of the most perfect form and beautiful colour, allied to soft, luscious, if not rich-flavoured flesh and exceedingly thin rind, it is as much entitled to rank as a dessert fruit as any other recognised fruit is. Indeed, it is very absurd to assert that it is not or cannot be such in face of the fact that it is already so regarded and consumed by millions of people.

But then there is to be remembered the fact that by common consent hitherto Tomatoes have been shown as vegetables, and such common consent cannot be ignored. To refuse to them their old position in vegetable collections would be as fatuous as it would be unwise; indeed, there is for such course no reason whatever. But then it will be said Tomatoes cannot be regarded as both fish and flesh, as both fruit and vegetable. To that it may be asked in reply, Why not? What earthly reasons are there why they might not be so regarded? Amongst vegetables on the exhibition tables they, when good, occupy a high, indeed a very prominent place. Amongst fruit, of course they come low in position. It is so far a fact as to be undeniable that the Tomato, more than any other product we have, forms a connecting link between fruits and vegetables, whilst they have botanically as good a title to be termed fruit as anything else that is grown.

In a matter that creates difference of opinion it is so natural for many who are yet undecided to turn to the Royal Horticultural Society for a proper lead. That is a judicial position from which that body may well shrink, although not lacking courage. It would almost seem as if a judgment already had been given, because the council did last year, as it has again this year, create classes for Tomatoes at the great fruit shows at the Crystal Palace, and thus have placed Tomatoes in the category of fruits. That position would seem to be emphasised by the fact that in the vegetable show schedule, to take place at Chiswick in September, Tomatoes are not mentioned. Still it will not for one moment do to assume that it is proposed to make Tomatoes into fruits absolutely and to ignore them as vegetables. Their omission from the Chiswick show is perhaps an oversight only, perhaps determined because included in the Crystal Palace schedule. However, the real mind of the society on this interesting matter will probably be clearly set forth later when the new code of judging is formulated, and no one need be surprised if therein Tomatoes are found to occupy the perhaps anomalous, yet imperative, position of being regarded as both fruits and vegetables. A. D.

**Rhubarb Hawke's Champagne.**—So popular has this early and richly-coloured Rhubarb become in the market, that it always obtains a higher price than any other, thus proving that colour is an important consideration. Later sorts have been very much a drug this season owing to the immense crop of Gooseberries everywhere and the early period of their maturing. The run on Gooseberries, however, serves to show the importance of having varieties of Rhubarb that are very early as well as of rich colour, and so far Hawke's Champagne seems best to meet these requirements. It is almost surprising to find how rapidly any variety is increased in the market gardens, but good ground and high culture soon create wonders. Then frequent dividing and transplanting into freshly manured ground also materially tend to precocity.—D.

**Dwarf Peas.**—All Peas in gardens have been experiencing a very trying time during the long drought which has been so marked in many districts. Especially have the taller varieties been distressed from lack of moisture, as these, but the taller especially, have to materially exhaust the soil resources of food and moisture before podding commences. When grown very thinly, as is now in good gardens more the rule, and sown in rows very widely apart, there is less trouble. If the ground has been deeply trenched or otherwise specially prepared by deep working and liberal manuring, the Pea plants may get over their trouble fairly well. But in myriads of gardens Peas, and especially tall ones, are still grown far too thickly, and on ground that has been only ordinarily prepared. No wonder by the time they commence to bloom the lower leafage is thin or flagging, and the plants are quite incapable of carrying a decent crop. In such case even liberal waterings and mulchings of manure seldom com-

pensate, as the roots are hardly helped and the mischief has been already done. It is during such seasons as the present that sorts that range from 2 feet to 4 feet in height, in which section we have many of the finest quality and abundant croppers, prove to be so serviceable. Being far less exhaustive of moisture than are tall Peas, they can be induced with fairly good culture and thin sowing to carry out their crops fully and to much more freely retain foliage. Frequent overhead sprinklings at night may also be easily given. It is very doubtful whether Peas that range to an average height of 6 feet are more productive from the same length of row than are those which reach to a height of only 4 feet. Even the growing difficulty of finding needful supports to Peas presents another reason of an economical kind why dwarf varieties are generally the best.—A. D.

**Mint.**—This excellent herb constitutes about Mitcham a very important field crop. On one farm alone over 20 acres are grown, but chiefly of the Peppermint, as that is the most useful for distilling. There are two varieties—white and black. The former, however, is far from being white. It is really less dark than is the black, and is the more esteemed because it furnishes the finest or richest perfumed oil. The common Spear Mint is also largely grown, but chiefly for ordinary uses. New beds are made every spring, and old ones seem to be renovated every few years. Much depends on how they stand. The ordinary course of culture consists in having ground very deeply ploughed and manured, well barrowed and levelled, then marked out into lines with what is called a racer, a foot apart. The young growths when just high enough to handle are lifted from the old beds and planted out from 10 inches to 12 inches apart in the rows, and where growth is good the plants form almost a dense mass to cut in August. It is then laid along neatly in rows, and later gathered up on mats carefully and carried into the distilling houses, where the oil is extracted. The refuse, because containing potash largely, forms good manure.—D.

### EARLY CAULIFLOWERS.

**MR. TALLACK** (see p. 421) does not recommend Waleheren for earliness, but Early London. As I grow Cauliflowers in considerable quantities I have at some little trouble gone into the matter and tested the earliness of various kinds. Early London in a trial at Chiswick last season was very much like Waleheren, but it must be explained the trial was not for earliness, but to test varieties. It was soon seen, however, which was the earliest; this was the Erfurt type, a variety I would strongly advise Mr. Tallack to try, as this season our Early Erfurt is all one could wish. It is also known as Dwarf Erfurt, and is really a splendid type of Cauliflower, not at all small for private gardens. As regards marketing, I cannot speak, but for earliness Early Erfurt is superior to all others. I think there must be several varieties of the Erfurt, as that I grow is large enough for all purposes, short in stem, and with a very compact flower or head; whereas Mr. Tallack says varieties of the Snowball type are generally too small for market. This brings me to the question of synonyms, and to show how the Erfurt section varies and is classed, I give the Chiswick classification in full. Early Erfurt, Early Short-leaved Erfurt, Dwarf Erfurt, Small leaved Dwarf Erfurt, Earliest Dwarf Erfurt, Dwarf Mammoth Erfurt, Snowball, Early Snowball, Early Taranto. These are all classed together as one type and described as follows: Plant dwarf, leaves small, medium-sized heads, from 6 inches to 12 inches in diameter, frequently larger, close, pure white, distinct, and the earliest variety. I should say mine are labelled Dwarf Mammoth Erfurt and are double the size named at this date (June 18). The crop is nearly all cut, the plants being autumn sown and wintered under hand glasses. Early London is known under the following synonyms: Stadholder, Large Early, Second Early, and Middle Late Dutch, and at Chiswick all these were, in my opinion, inferior to the Erfurt as regards earli-

ness. Strange to say, the Walcheren is included as synonymous with the Early London section; whereas my Walcheren is more compact, dwarfer, and equally as early as Early London. The last section is described as medium sized, tall, head 8 inches to 12 inches in diameter, solid, and of excellent quality, but with the following addition, the plants vary considerably, according to selection. My Walcheren is quite distinct from Early London—doubtless a better selection. Selection is an important point in vegetables of any kind, as it takes years to get a true stock. Considerable advance has been made by the introduction of the early kinds, of which the Erfurt is the type. The same remarks apply to the later section, such as the Autumn Giant and Autumn Mammoth types, though I do not favour a huge, coarse Cauliflower in any shape or form, nor am I in favour of those small kinds which button prematurely. Doubtless it was these latter kinds Mr. Tallack had in his mind when describing some as too small. The true Erfurt section is large enough for all purposes when well grown, and Mr. Tallack should give it a trial if he can get a good stock. I am sure he would find it useful and reliable. Some twelve years ago I had a wretched strain of Early London, and have not grown it since. I expect this variety varies quite as much now as then. Mr. Tallack may have a good type, as he says it must be grown for its earliness. I have had Erfurt sent for Walcheren, and *vice versa*. G. WYTHES.

**Turnip Orange Jelly.**—"J. C." does well on p. 421 to call attention to this Turnip. It is quite one of the best for autumn and winter use. At the Chrysanthemum show in Edinburgh at the middle of November last year it was shown in almost every collection of vegetables, and that is saying much for it, as collections there are perhaps more numerous than at any other autumn show in the United Kingdom. The uniform size, clear skin, and perfect shape of the Orange Jelly Turnip much impressed me.—E. M.

**Early Cabbages and other greens.**—At p. 398 "A. D." does well to point out the dearth of greens or good Cabbages during May, and the persistency with which market growers adhere to the large, coarse varieties with much leaf that are later than the small-hearted varieties. I suppose it is difficult to get over the preference for mere size in everything marketable, and thus the large kinds are more grown. I know that retailers have a decided preference for the large-leaved Cabbage with a tie round them to make them look presentable. A dearth of greens could readily be prevented if more attention were paid to the dates of sowing, planting out, and other details, and many large growers could take a lesson from private growers in this respect. I do not see where the loss would come in by planting small kinds, as so many can be grown on a small space. Again, the new Kales of the Messrs. Sutton would prove valuable market vegetables in such severe winters; their arctic Kales are frost-proof. Sown late they soon make good plants. In seasons when there is plenty of Broccoli they may not be so acceptable, but then they may be used before the Cabbage or Broccoli turn in.—G. W. S.

**Transplanting Parsley.**—This is necessary in order to ensure a plentiful supply during autumn, and also to furnish roots for lifting in October and planting in cold pits and frames for winter supply. Where through absence of rain the ground is hard and dry, a thorough soaking after levelling and raking must be given. If a narrow border slightly shaded by espalier trees can be given, so much the better; or if not, shading by evergreen boughs must be resorted to. Use great care in drawing out the young plants from the seed rows and plant with a trowel, firming well and afterwards watering home. In gardens where wireworm is troublesome prick in some soot and burnt refuse. Gas-lime must not be used where planting has to be performed immediately. Where a cool pit can be spared, a transplanting

into it may well be made, this of course doing better as a rule than plants removed in autumn. In transplanting Parsley in the open garden select also a small square plot, over which a two or three-light frame can be placed in November, as it is next to impossible to have too much for garnishing and general kitchen work during the winter months. I always sow here about the middle of July for a spring supply, protecting the young plants in winter by a frame. This sowing soon makes large fronds fit for use in spring, whereas if sowing is deferred till March or April the produce is not fit for use till mid-summer. Dobbie's Extra Curled Parsley and Veitch's Curled are capital kinds.—J. C.

**Lifting early Potatoes.**—The earliest Ashleaf Potatoes growing on south and other warm borders if ripe may now be lifted and sorted, eatable tubers being stored in a cool dark place and the seed treated similarly. Some advocate leaving the tubers out in the open air for a week or ten days to become green from the exposure to sun and air, supposing that a more thorough ripening is thus effected and a stouter and better start guaranteed in spring. I have tried this plan and could never see any real difference between them and the tubers which were housed as soon as dug. The ground hitherto occupied by these early Potatoes may now be broken down, and after having a good watering be utilised for sowing Lettuce and other quick-growing, shallow-rooting things, being then ready for such crops as Coleworts at the end of August.—C. N.

**Frost in Notts.**—Last year we thought May 20 late for frost, that being the date of the disastrous one, which gardeners will long remember. This year we escaped in May, only to have the things cut down in June. On the night of Friday, the 14th, frost of a severe nature visited this neighbourhood, cutting down Potatoes, Scarlet Runners, and Dahlias, and checking other tender crops. Within a radius of eight miles 6, 7, and even 8 of frost were registered, and on our own premises ice could be found on gates and rails in early morning. This is a very serious matter, and must materially affect small market growers who depend on their gardens for a living. Fortunately our own garden lies rather high, and the soil is dry and warm, thus we escaped the damage which those around us received. It would interest me to know if this frost was general.—J. CRAWFORD, Newark.

#### TOMATO NOTES.

ARE old or comparatively old varieties of Tomato more subject to disease than those of recent introduction? This query, I think, many will answer in the affirmative. My experience is decidedly in favour of discarding the old sorts, as they are so prone to disease in some of its many forms; consequently they are less productive, and the fruit from these diseased plants is neither so well formed nor good in flavour as from clean healthy plants. Up to the present date (June 18) we should naturally conclude that the season had been specially favourable for Tomato culture under glass, but, on the contrary, I never recollect so many inquiries on how to conquer disease in different forms. The most general appears to be *Cladisporium fulvum*. Several old market growers state they never had so violent an attack as this year, and after trying various remedies (so-called) have fallen back on the plan of removing the infested foliage and encouraging new growth. The black spot (*Sporocybe lycopersici*) is more than usually in evidence in some gardens, but I believe this may be practically ousted by keeping the hot-water pipes warm on dull or cold days, also at night, and maintaining a dry, warm buoyant atmosphere in the house continually, which will do much to keep the *Cladisporium* in check as well. Another disease that is more difficult to deal with is the one that suddenly attacks a healthy-looking plant, and in a few hours the foliage droops and the plant is completely done for. I had a few plants this spring thus attacked.

These were at once pulled out and burnt, and no further signs of the disease have appeared. One cause of disease not sufficiently known is, I think, that of sudden changes from dryness to wetness at the roots. Plants in pots or in shallow borders when full of vigour absorb a great quantity of moisture and quickly become dry at the roots, unless given close attention, which is not always possible in these days of reduced hands; and, judging from close observation, the repeated changes from dryness to the reverse are prime causes of disease. The white fly (*Aleyrodes vaporariorum*) is occasionally very troublesome, messing the fruit and materially weakening the plants. Fortunately this pest is easily destroyed, the recipe for which I am indebted to Mr. Iggulden, who stated in one of the horticultural papers (I forget which) some six or seven years ago that flowers of sulphur mixed with milk and painted on the hot-water pipes would effect a cure. I immediately put the advice in practice, with such excellent results that no white fly has appeared since.

Many Tomato growers consider that natural manures promote a growth that is liable to attacks of disease more readily than plants fed with chemical fertilisers, and I believe they are correct as proved from actual experience. Unfortunately, many gardeners are unable to obtain these chemical fertilisers, as some employers object to purchasing the same while there is plenty of natural manure to hand; consequently one has to make the best use of the materials at disposal. On a light soil I can strongly recommend the following mixture as a really good manure for Tomatoes: 1 lb. of nitrate of soda, 1 lb. of muriate of potash, or failing that 3 lb. of kainit and 3 lb. of superphosphate, mixing the whole thoroughly together and applying at the rate of 1 oz. to each super yard of border, taking care that none of the mixture falls on the foliage or fruit, as it is apt to scald either if it falls thereon. The above dressing may be given about once a fortnight to plants in full bearing. The effect will not be so apparent in the growth as in the rapid swelling and size of the fruit, together with the free setting of the trusses as they form on the plants. Fish guano is another good manure, giving satisfactory results, but has not such a weight-giving effect on the fruit as the preparation named. Amongst natural manures the liquid made from sheep manure has few if any superiors, as it is a reliable fertilizer without the burning character of the drainings from stables or cattle sheds. Pig manure is strong, but on the only occasion in which I employed it as a mulch I found that a quantity of the plants died from the attack of an insect at the roots resembling eel-worms, which no doubt bred in the manure, as I have had no similar attacks before or since. Amongst new or comparatively new Tomatoes that are cropping freely with no signs of any disease the undermentioned are the best. Early Ruby is a very early sort, the plants commencing to fruit almost close to the soil, and the produce ripening about a fortnight before any other variety sown at the same time and grown under exactly similar conditions. Some of the fruit is of very good shape, while others are corrugated, but for home use or market it is valuable for its prolific habit and earliness. A variety that I received from Messrs. J. Carter and Co. named Canadian Express is the most profuse cropper that I have grown; it follows Early Ruby in ripening its fruit, which is large, slightly corrugated, and on light soil the trusses are borne in such profusion that they overlap each other on the plants. Frogmore Selected follows the above in ripening, but I must admit being disappointed with this variety; it may be that the soil or my mode of culture is unsuitable. Whatever the cause is the plants are not sufficiently fruitful to warrant my growing it another season. Duke of York was only a day behind the last-named in ripening its fruit, and what a grand fruit it is; the shape, colour, weight and general appearance are so good that a fruiterer who purchases largely informed me that he would give a penny per pound more for Duke of York than any other variety I sent him. In addition to the good points named it is also an

excellent bearer. Polegate is another fine main crop variety, possessing a short-jointed sturdy habit, well set with moderately sized trusses of fruit, and I think likely to become a reliable market sort. Carter's Market Favourite is a variety that I have not grown, but when at Maindiff Court Gardens, Abergavenny, recently I saw it in splendid form, the plants being covered with handsome fruit of a size very suitable for market. Mr. J. Nowell, who has charge of those gardens, states that it is one of the most profitable Tomatoes in cultivation when done well, and judging from the appearance of his plants they confirm his statement. W. G. C.

**Pea Criterion.**—This fine Pea fully deserves all the praise that has from time to time been given it. It is the summer Ne Plus Ultra, growing and yielding well in hot weather and on sandy soils. The colour and flavour are irreproachable, and it continues to bloom and pod over a long period. Criterion ought certainly to be grown by all to whom quantity and quality combined are an object.—J. CRAWFORD.

**The Pea crops.**—The present season is an unfavourable one for Pea growers for market. The early spring was so unfavourable that the earliest crops were kept back, while the second sowings, influenced by the protracted drought, did not grow to their normal height, and are podding almost simultaneously with the first sown lots. Thus the markets are glutted for a short time, prices rule low, leaving but little profit for the grower after deducting rent and labour. Even on cool, moist lands Peas look yellow and unhealthy on account of the cold winds, which have prevailed at intervals for many weeks. Pea growing for profit now-a-days is much more uncertain than formerly, when heavy crops not only paid the grower, but found lucrative employment for many poor people.—J. C.

**Early Cauliflowers.**—I was always under the impression, and which appears also to be the opinion of Mr. J. C. Tallack (p. 421), that Early London is an earlier Cauliflower than Walcheren. Judge, therefore, my surprise in looking over the report of the trial of Cauliflowers at Chiswick last year and published in the last volume of the Royal Horticultural Society's Journal, that Early London and Walcheren are given as synonymous. The Walcheren as grown by me is certainly a little later, although this season not to such a marked extent as other years during duller and moister weather. The leaves have a more curled appearance, and it is also a better hot weather Cauliflower than Early London. Possibly some other correspondents can give a little explanation. Autumn-sown Cauliflowers have turned out capital this season, and certainly in advance of any sown at the turn of the year. The plants are altogether stronger and better able to withstand the dry and hot season. Plants raised from seed sown early in the year require a lot of looking after, and I cannot see where the saving comes in either of labour or time as some people suppose there is over autumn-sown plants.—A. YOUNG.

**Radishes during hot weather.**—Where a supply of Radishes has to be maintained throughout the summer and autumn months there is often a difficulty in keeping it up during a hot and dry season. Grown on poor soil and in too exposed a position Radishes are tough and hot. Having a regular supply to keep up I give a little more attention than ordinarily bestowed on Radishes. Too much rank manure is not good for them, the quality not being nearly so good as from a bed which is mainly composed of rich soil. An east border is the best position for summer and autumn Radishes. How I manage is to prepare a good heap of old potting soil, burnt refuse, leaf-soil, and some spent Mushroom bed manure, the whole being spread to the depth of 3 inches over the extent of border to be devoted to this crop for a season. The seeds should be sown thinly in drills, and during dry weather be kept well watered. Manure water should not be used. There should be no set time to finish sow-

ing in the open. Last year, on account of the weather being mild up till Christmas, we had daily supplies from the open air till that period.—A. YOUNG.

## TREES AND SHRUBS.

### LEMOINE'S NEW PHILADELPHUS.

A FEW years ago we looked upon the little Philadelphia microphyllus from Colorado as being quite an exceptional addition to a genus which abounds in so-called species and varieties too much alike. P. microphyllus is a pigmy compared to any of the others and its crowds of white blossoms have not that heavy, and to some disagreeable, odour which most Mock Oranges possess. It could not have been long after this little plant was first brought to Europe before that keen hybridist, M. Lemoine, of Nancy, secured it for operating upon, for we see to-day, in the beautiful hybrids that he has given us, how prompt he must have been. He, no doubt, saw that by mingling the dwarf and free-flowering habit of P. microphyllus with that of the tall, larger-flowered species like the common P. coronarius, a beautiful progeny would be the result, as most certainly it is. The three or four hybrids that I have just seen for the first time are a revelation to me. They are all much alike, so that one description will apply to all. The growth is erect, remarkably so, and each shoot is wreathed with pure white blossoms as large as those of the common Mock Orange from the base to the tips of the shoots, which are from 2 feet to 3 feet high. I have only seen the plants in the collection at Kew, but I do not see any marked difference between those named Lemoinei, Lemoinei erectus, Gerbe de Neige, Boule d'Argent, and Candelabra, though these may, of course, be quite distinct when more established. In great perfection may be seen a mass 10 feet through of P. Lemoinei in the arboretum. Every shoot is a sheaf of white bloom and buds, with just sufficient foliage to serve as a foil. One can see the mass of white 100 yards off, and near it there is a soft and exquisite odour like that of a passing barrowful of Pineapples. It is the most glorious new small shrub I have seen for years and is sure to become popular. It lasts a long time in bloom, for weeks, I might say, is not particular about soil or site, and has not flinched, I am told, under the cold of the last arctic winter. Those who love hardy flowers should see this new-comer and the hosts of beautiful plants that make Kew so full of interest just now to those who have eyes to see and hearts to appreciate and enjoy.

Kew.

W. GOLDRING.

**Erica ciliaris alba.**—This dwarf growing hardy Heath, just now giving a profusion of its pure white blossoms, is very showy, and deserving of extended cultivation where the natural soil is favourable to its growth. Around the edge of a Rhododendron bed or border or at the foot of tall growing Kalmias is a suitable site for planting it. Like the bulk of low-growing Heaths, this is easily increased by dividing the roots in early spring.—E.

**Pterocarya caucasica.**—We have a very fine specimen of this tree, and though not reaching the dimensions named by Mr. Burrell, it makes equally rapid growth. Some young trees planted a few years ago are now telling objects in the landscape, and I am surprised this beautiful tree is so uncommon, as it does so well in a fog or smoke-laden atmosphere. I carefully read the note alluded to on p. 424 to see if the fine specimen named was near water, as this tree delights in a moist situation, being a gross feeder. Ours is partially in water, and throws up a great number of suckers. I can well understand the roots going in search of food and moisture, as the great amount of foliage must require a lot of support. I cannot reply to Mr. Burrell's query as to its behaviour in its natural habitat, but it cer-

tainly is fond of moisture. Apparently in this country the tree grows quite as large as in the Caucasian range. Its height there is given as 20 feet to 40 feet. Our tree is taller, very healthy, and one of the most ornamental.—G. WYTHES.

**The Guelder Rose as a water plant.**—Though the common Guelder Rose, or well named Snowball Tree (*Viburnum Opulus*), is also known as the Water or Marsh Elder, yet it is seldom that one meets with it grown in lakes or streams. I found, however, a fine specimen the other day growing and blooming most profusely in a small lake of very cold spring water. The plant was almost 6 feet high and looked as much through, the very picture of health, and smothered with its flower snowballs. In this lake was a small island, and this fine plant was so low down on one side of the latter as to be inaccessible either from the island or the mainland. It was seen in the first week of June, and its roots had evidently been submerged all winter, possibly for years, as the second peculiarity of the spring that furnishes the lake is that the supply of water is as constant as it is cold. Perhaps some readers of THE GARDEN will give their observations and experience as to the growth of other species of Guelder Roses in water, such as the common Wayfaring Tree (*Viburnum Lantana*), whose green leaves glow with a deep red or fiery scarlet in the autumn, and the American Wayfaring Tree (*V. lantanoides*), with finer foliage, fruit, and berries than the British Wayfaring Tree. Other species worth trying in water, wet places, or swamps would be the Sheep Berry or Sweet Viburnum, *V. Lentago*, *V. Fortunei* or *macrocephalum*, with large flowers and leaves, and the variegated-leaved and other varieties of the common Guelder Rose (*V. Opulus*). The *V. odoratissimum* is said to have the scent of *Olea fragrans*, and if so deserves the best place that can be found for it in the choicest garden or shrubbery or cool greenhouse, as it is little more than half-hardy. *V. plicatum*, though fairly hardy, is also invaluable in pots for anticipating in cool conservatories the beauty of the Guelder Roses.—D. T. F.

## GARDEN FLORA.

### PLATE 1020

#### NEW SINGLE CHRYSANTHEMUMS.

(WITH A COLOURED PLATE OF C. PURITY AND C. DISTINCTION.\*)

THE coloured plate shows two new single varieties raised by me at the Earlswood Nurseries, Redhill, Surrey. Purity was distributed in 1893 and 1894, when I predicted it would become one of the most popular varieties. Last autumn it was awarded four first class certificates and was exhibited in nearly every collection of singles at the various shows. Distinction is really better than Purity, having bold thick broader florets and the colour is very rich. Unfortunately, up to the present the old stool of last year, although it still retains the foliage, has not furnished a cutting. Should it persist in this character, one of the very best single kinds ever seen will be useless for gardens. Single Chrysanthemums are so useful for decoration as cut flowers, that it is no wonder they are beginning to be cultivated to some considerable extent. They furnish nearly every colour for the dull winter months that the Shirley and Iceland Poppies, Gaillardias, Harpaliums and Marguerites supply in the summer. They do not require disbudding, for their chief beauty is in their graceful sprays. Some varieties can be cut with stems 2 feet long bearing flowers

\* Drawn for THE GARDEN by H. G. Moon, in the Earlswood Nurseries, Redhill, Dec. 1, 1894. Lithographed and printed by Guillaume Severeyns.





their whole length, and if the old stems are left they throw out a number of small shoots below which give a succession of flowers on to February. Some of the best small flowering varieties are Scarlet Gem; Miss Mary Anderson, white; Treasure, yellow; Emily Wells, pink; Earlswood Terra-cotta, and Golden Bronze. Of the larger flowering and medium sized, there is a great choice. Rev. W. E. Renfrey, Mayblossom, Foxhunter and Charman's Joy are scarlet or crimson; Nora, Mrs. D. B. Crane, Miss Grace Rennie and Rose Pink are all pink; whilst Purity, Lizzie Mauwaring, Virgin Queen, Jane in whites, and Admiral Sir T. Symonds, Arthur Horne and Distinction in yellow; with Earlswood Terra-cotta, Esthetic, Lady Churchill and Salmon as a selection of the best. For pot plants the best are Miss Rose, Scarlet Gem, Gus Harris, Earlswood Terra-cotta, and Miss Mary Anderson. These should be rooted in March, pinched twice, and then grown on in 5-inch or 6-inch pots. The general collection for cutting in sprays should be propagated in January or February, pinching twice and allowing ten or twelve shoots to grow to each plant. They like good rich soil as well as the general collection of Japanese and incurved, but they need not be attended to so closely. I generally put one stake to each plant and loop the branches to it.

W. WELLS.

## THE WEEK'S WORK.

### THE KITCHEN GARDEN.

**GENERAL ROUTINE WORK.**—The past few weeks, owing to absence of rain and frequent parching winds, have afforded an opportunity of thoroughly eradicating weeds amongst all growing crops. Where rain has fallen, no time must be lost in going through all growing crops now in their infancy and hand-weeding the rows or beds. Seedling Nettles are a pest in some gardens, and unless kept under soon choke and spoil the plants. Onions, Beet, Parsnips, Salsify, and Scorzoneria, also seed beds of very early Endive, come especially under this heading.

**MULCHING.**—I have already advised this in the case of earlier crops of Peas, Beans, and kindred subjects, successional crops must now have attention in this matter. All have not time for this work, but the practice is beneficial from every point of view. In many gardens where vegetables are forced on hotbeds ample material for mulching purposes will now be obtainable, and nothing forms a better mulch than old, exhausted forcing beds, and there is always a certain amount of nourishment left in the material to be washed down to assist the roots. Peas, Broad and even French Beans, beds of early Seakale for forcing in November, Scarlet Runners, and even spring-sown and Tripoli Onions respond quickly to a mulching, the same retaining the moisture communicated by rain and preventing undue evaporation. While dry weather continues, a good soaking once a week or ten days may, where practicable, be given. The use also of artificial manure previous to watering not only aids growth, but likewise enriches the ground in readiness for other crops which are to follow these impoverishing ones. Later batches of Spinach as soon as a few inches high enjoy a good mulch as much as anything.

**LATEST WINTER GREENS.**—In many places gardeners are not able to get out their final plantings of late Broccoli, Kales, and other late winter and spring subjects as soon as they would like, owing to the ground being occupied with other crops. Now, however, all speed must be made, as if the plants in the seed beds are becoming large and crowded, a free, vigorous growth after transplanting cannot be expected. Saturate the soil the day previous to drawing out the young plants, or

many of the best fibrous roots will be broken. Draw out good deep drills and soak these also at the same time. Refrain from pulling many plants at a time, placing them in a sieve or basket and covering with a Rhubarb leaf, finally watering home and drawing a little soil from the sides of the drill around the stems of the plants to prevent undue evaporation. If a little rough material can be spread between the rows and round the plants, as recommended for the Seakale and other crops, so much the better. Be sure to plant plenty of the Kales, both Scotch, tall and dwarf, and Asparagus, as these are practically frost-proof and continue to throw out side sprouts from the stems until the earliest Cabbages come in in April or May. Ragged Jaek, commonly grown in the open fields, is also most useful in spring and makes a pleasant change in the dining room. All the foregoing are best put out on firm soils from which other crops, not of the same nature, have recently been cleared. If too hard for the dibble, a crowbar may be used. Another and final planting of Savoys may also be made, but as an exposed situation and dry root run often cause these to heart in before wanted, a north border should, if possible, be selected and a good quantity of rich manure incorporated, firming well before planting. The old Drumhead variety is unsurpassed for this last batch, taking longer to arrive at maturity and not so liable to rot from excessive rains and frosts, its leaves overlapping one another in such a manner as to protect the centres. If Chou de Burghley was sown as recommended at the beginning of May, the plants will now be ready for moving. If put out in rich soil, Chou de Burghley is a most delicious vegetable. Plant as for Kales, allowing 2 feet between the plants and the same between the rows. Prick the small plants out in a moist rich bed and plant out in three weeks' time to give a succession. Chou de Burghley is quite hardy, late plants making headway even in frosty weather.

**LATENT BROCCOLI.**—As second early Peas and Potatoes are cleared off, such valuable late varieties of Broccoli as Model, Late Queen and Methven's June should be transplanted. The same hard root-run is advisable, a small basin being afterwards made round the base of each to hold water. If the ground is not in extra good heart a good broadcast sowing of some approved fertiliser may be given as soon as growth is visible, and again say in a month's time.

**SALTING ASPARAGUS BEDS.**—The present time is opportune for giving a second dressing of salt to the surface of Asparagus beds, not altogether as a manurial agent, but as a weed destroyer. If there is any Twitch growing in the beds, the best—and indeed only effectual—way of removing it is by the use of small hand-forks: the roots are then extracted and further growth prevented. If my advice respecting Asparagus beds given in April was followed, and a mulch of short manure given to those composed of sandy soil and resting on a gravel subsoil, a little artificial manure should be mixed with the salt and afterwards worked in amongst the manure with a rake. It will then be ready for washing down to the roots as soon as rain comes. Much may be done between now and the period when the stems begin to turn yellow towards encouraging strong crowns and a multiplicity of roots near the surface, the best and indeed only guarantee for a productive crop next season. Where beds exist in low situations not over well drained, the use of salt, except in exceptional dry seasons, is not advisable; hand-weeding must in such cases be resorted to. See that the grass from young plants in newly-planted beds is supported by small stakes, or high winds may break it down and a weak stool follow next year. Assist also these young beds with liquid manure.

**BEANS IN COLD FRAMES.**—These, where planted out at the time advised, will now be in flower, and good treatment must be accorded, or the end in view will be defeated. I do not hold with the common practice of allowing the rows to fall one against the other. Rather support them by means of short, stout sprigs. The air and sun will

then penetrate to the interior, and not only a more abundant crop, but one of better quality will ensue. The roots also must not lack moisture or nourishment, especially just at the setting period, and no old pods must remain on to use up the vital force of the plants. Overhead waterings are of great help to French Beans, these being given liberally at eventide, so that the foliage may be enabled to recoup itself after the strain put upon it by hot sun and parching winds. I still find Syon House capital for cool frame work, also Negro Longpod and Canadian Wonder to follow.

**CELERY MAGGOT.**—Owing to a parched state of the atmosphere the Celery fly will be liable to abound early this season. A sharp watch must be continually kept, and on the first appearance of leaf-disfiguration hand-picking must be resorted to, as there is no other remedy, the maggot being between the tissues of the leaf and away from the reach of any insecticide. Occasional sprinklings of soot may, however, ward off the attacks of fly.

J. CRAWFORD.

### FRUIT HOUSES.

**EARLY PEACHES.**—The fruits will now be gathered from trees in early houses, and should red spider have obtained a foothold on the trees during the ripening period, take special precautions to get rid of the pest now. The weather during the past few weeks has encouraged insect pests, it having been necessary to keep the house dry. To get rid of spider the best remedy is abundant syringing night and morning, but even this is not always sufficient. With dirty trees a dressing of soft soap, sulphur, and rain water will be best, well covering the affected portions and syringing freely daily from the third day after applying the dressing. It is also well to place a little sulphur in the water occasionally when syringing in the evening. The roots will also be in condition to receive copious supplies of moisture, and in case the mulch given before the fruits coloured is absorbed, a renewed mulch now will assist root action, keep top-growth clean, and save labour. Give the trees abundance of air, and get the wood as matured as possible, as the more the wood is ripened the better next season's crop. Peaches and Nectarines often suffer after the fruits are cleared, not being given sufficient water. Now is the time to secure good fruiting wood for next season and prevent bud-dropping, so troublesome with early trees. Although I have advised abundant supplies of air, hard forced houses should not be thrown open all at once, but gradually increase the supply of air after the gathering is over. With trees not in a robust condition it is well to allow a little warmth in the pipes in dull weather; this keeps them moving freely and the wood gets better ripened.

**SUMMER-PRUNING OF PEACHES.**—Much may be done now in the way of pruning the early forced trees, and these remarks will apply to those in succession houses as well. By pruning now the main growths will get more room to develop, and the fruiting wood for next season can be more carefully attended to. All wood, or nearly all, which has borne fruit may be cut back to the young growth at the base of the shoot which was laid in. A lot more room is thus obtained, and it can readily be seen how much wood will be wanted to furnish the trees, whilst by regulating the shoots the syringe can readily wet all parts of the trees. As young trees often make much wood, there is no better means of removing any useless growths than by summer-pruning. As soon as the pruning is completed, fire-heat may be dispensed with should the wood be well developed, and the house thrown open to harden the growths. Young trees when tied to the trellis in the winter are often given too little room. Now is a suitable time to give the trees more freedom, loosening ties, and thus preventing gumming and canker, which closely follow restricted growth or damaged bark. In pruning young trees, use the knife sparingly if there is ample room for extension, as

a large space may soon be covered, and the lateral growths springing from the main branches may be turned into good fruiting wood for the next season.

**SUCCESSION PEACH HOUSES.**—The fruits will be ripening, and with abundance of sun-heat very little fire-heat will be required. Peaches given free ventilation are of superior flavour to those grown in a moist, warm temperature. With more air it is well to give moisture freely, and although trees cannot be syringed overhead, all parts of the house can be moistened, as a certain amount of moisture is necessary to get perfect fruits and high colour. The stems of the trees may be damped daily, and any portion of the trees not covered with fruit may be syringed freely. In a previous calendar I noted the importance of going over the trees daily, removing the ripe fruits early in the day, this being much better than allowing any to fall into nets. There is no fear of damage by gathering carefully, and such fruits may be kept good for days in a cool, airy room. Fruits to be sent any distance should not be allowed to get fully ripe, as their weight when travelling—no matter how well packed—bruises the fruits. Trees that are dry at the roots should be given sufficient water to tide them over the ripening stage, and when cleared should be treated as advised for earlier houses, giving a good dressing of manure or liquids to those much exhausted after carrying heavy crops.

**LATE HOUSES.**—The trees are more forward than usual and I have dispensed with fire-heat. At the same time a little extra care is necessary in changeable weather, to ensure the fruits swelling freely. Syringing late trees is necessary twice daily, and there is no excuse for dirty foliage in late houses that can have ample supplies of water in all parts. Feeding and mulching are equally important, as the roots soon dry at this season. The fruits should be freely exposed by removal of leaves or useless shoots to get the high colour so desirable, and the final thinning should not be deferred, as all fruits should now finish well. A good mulch of rich manure will assist in finishing up the crop, but if delayed the fruits reap little benefit and a late growth results, which does not ripen well. Remove any useless laterals that are not required. Young trees should be allowed free extension of branches, as advised for mid-season trees, and crowding avoided.

**THE ORCHARD HOUSE.**—Much the same routine is necessary with trees in pots as advised for trees planted out, but more care is necessary in watering and securing firm sturdy growths for next season. Mulching must be regularly attended to, as the mulch frequently gets washed away with repeated waterings. A good mulch at this season is horse droppings that have slightly heated, with a liberal dressing of bone meal or other good fertiliser given on the surface before the mulch is applied. The waterings, so necessary for pot trees, will soon absorb the food from the manure, and by keeping the surface cool plenty of top roots will be made. In addition to the food advised, it is well to water frequently with liquid manure, and if a bag of soot can be immersed it is of great help in keeping the trees in a vigorous state. The syringe must not be spared, with ample supplies of air. Pinching and regulating the wood will still be important, as the trees laden with fruit have a great demand upon them, so that it is well to remove wood not required. Trees that have borne a crop and are well furnished with clean healthy wood may be removed into the open, plunging well over the rims of the pots, damping overhead daily when the sun leaves the trees, with ample supplies of moisture. Cherries and other early fruits are much benefited by removal if due attention is paid to the roots, and in the case of Peaches or Nectarines, give abundance of air to these trees as the fruits mature. Trees in the open grown this season specially for house culture next year will well repay liberal treatment to get strong well-ripened wood, stopping the shoots except extensions at the sixth leaf and pinching any lateral growth hard back. Feed freely and mulch over the surface. Now is a good

time to remove Pears, especially the early varieties, to warm sunny borders, taking care the roots are not exposed to the rays of the sun. The same remarks apply to Plums, except the late varieties, which should be kept under glass. A general overhauling of trees in this house will be beneficial, as many will now require cooler treatment and benefit by open-air exposure. Peaches and Nectarines where repotting is required may be prepared for the same by free exposure, and when the new wood is well matured a shift may be given into larger pots, but it is well to keep the trees under cover till the new roots reach the sides of the pots, when they may be removed into a south or west border, plunged, and the surface soil covered with a mulch of straw litter, the trees being syringed daily and watered carefully till the pots are full of roots. In potting use a good calcareous loam, old lime rubble (a liberal proportion of bone-meal if a large shift is not given) and ample drainage. Trees not requiring a shift should be liberally fed after the crop is cleared, and if the wood is matured they may be placed in the open and syringed daily in the evening.

G. WYTHES.

#### TABLE DECORATIONS.

Will some reader of THE GARDEN kindly give a few hints as to table decoration? I should be glad to know how to arrange flowers and Ferns on a dinner table.—F. THOMAS.

\* \* \* "F. T." having adopted this term rather than the far wider one of "arrangement of cut flowers," the remarks that follow will bear more particularly in the direction of the former heading. It is a very wide subject upon which to treat, for what prevails in one establishment may not in another. Both the selection of material and the choice of vases will vary greatly. A decided improvement has been manifested in table decorations during the past few years. There are some of whom it must be stated that they will apparently never learn what lines to follow. There is plenty of opportunities at the present day both for taking notes and for impressing upon the mind the most tasteful styles of arrangement. For this we are greatly indebted to the encouragement given by the most noteworthy of the horticultural societies at their shows. At these exhibitions there are nearly always sufficient examples of tasteful arrangements as well as of those quite the reverse, so that comparisons can easily be made. Many very beautiful designs are to be seen in the shops of the best florists who make cut flowers a speciality, but these have more particular reference to other than table decorations.

#### FLOWERS AND FERNS.

I note that "F. T." makes use of these words; a few comments thereon may not therefore be out of place. At one time—and that not so very many years back—it was thought quite the correct thing to use Fern fronds (more particularly those of the Maiden-hair) with flowers, be the latter what they may. This custom has been broken through, I am glad to say. I have not the least objection to this beautiful Fern, but its use with all kinds of flowers is quite out of place. In the similar way that rich food will cloy the palate, so will Maiden-hair Fern the sight if it be used indiscriminately. No one of taste would now think of letting the Maiden-hair entirely supplant the foliage of the Rose when Roses are being used. A frond or two here and there would aid in the effect, but let the foliage of the Rose predominate. This may be accepted as a general rule—wherever possible rely upon the foliage of the plant to accompany its flowers. For instance, I will quote the Daffodils; with these

use their own foliage most decidedly; the Lily of the Valley and its own leaves; the Water Lily and its foliage, or some other resembling it; the Gardenia and its own sprigs, with several leaves upon them, cannot be surpassed; the Tulip, with its own leaves; the Roman Hyacinth, of which the most suitable leaves are those fully developed, the spikes being often cut whilst the foliage is still too short; with the Eucharis either use small leaves of the plant itself, or such as those of the green-leaved Aspidistra; with the Camellia, its own foliage most decidedly (what can surpass it?); the Tuberosa in vases looks best with its own or similar foliage; if Chinese Primulas are being used, let their own leaves be used also here and there. But some may say, "What about Orchids? Is it advisable to use their own leaves?" No, most decidedly not, but there are other kinds of foliage which may be used. From the stove there are the leaves of Caladium argyrites and other kinds; those of Fittonia argyrea (shoots rather than leaves); Cyrtodeira metallica, the shoots of which look very beautiful with light-coloured Orchids; Panicum variegatum, of which long sprays are the best; Asparagus plumosus, either as plumose sprays or long trailing shoots; Myrsiphyllum asparagoides as sprays also (a cooler house will suit this); Cissus discolor in sprays, fairly well matured, beautiful with Cattleyas. From out of doors can be taken the shoots of such hardy plants as Acer palmatum, whilst growths of the hardy Panicums may be quoted as examples amongst Grasses. From amongst Ferns themselves there is a wide field of choice. Take, for instance, the Davallias, which are of most diverse character, nearly every one lasting exceedingly well in a cut state, several of the Aspleniums, the Nephrolepis, the larger Adiantums, the Pterises, and the Gymnogrammas—all of these will serve a good purpose. Omission should not be made of the Rex type of Begonias, nor of such species as B. metallica. Although these instances have been quoted with more particular reference to Orchids, they are quite as applicable to other flowers when "suitable."

#### SUITABILITY OF FOLIAGE TO FLOWERS.

Some idea of this may be gathered from what has already been written; there is, however, a kind of affinity distinguishable in many instances. Lilies and Grasses associate well together. Take as a case in point two varieties of Lilium lancifolium, or one only for aught it matters, and as additional foliage use the shoots of Eulalia japonica or Elymus glaucifolius. A centre-piece arranged with these alone and a trailer around the stem, with a few more shoots springing from its base, amongst which might nestle a few flowers of Eucharis or of Pancratium, a few bolder leaves resting upon the cloth as a finish. Supposing it to be the spring season with the Spanish Squills in flower (Scilla campanulata), with one or more colours of these a few shoots of the common Ribbon Grass would look well amongst the spikes. The bronzy foliage or shoots of some of the Tea Roses cannot be surpassed with the yellow and other soft shades of colour to be found in their own particular section. To enumerate further under this head is scarcely necessary; many other examples will suggest themselves at various seasons of the year. Again, there is the Chrysanthemum, for which scarcely anything more suitable could be chosen outside of its own genus than the shoots of Mahonia aquifolia. If the flowers of the Chrysanthemum be either yellow, or in its shades merging into bronze, or white, or any other light colour,



take the bronzy-tinted shoots; if the colours be brighter, then use the green shoots.

#### ARRANGEMENT OF THE FLOWERS.

Under this heading I shall at once condemn the evil of overcrowding; it still prevails, but not to the same extent as it used to do. One most fertile source of overcrowding arises from the use of flowers with too short stems. This is a common mistake made when cutting them, caused often perhaps by the gatherer not being the arranger. It may be said against long stems that it is often a waste to cut such, but if half as many in quantity will suffice with long stems (which they will in many instances), where does the waste come in? It is rather the reverse than otherwise. In the arrangement itself always endeavour to secure a light and graceful effect. If the thought should arise that too many flowers have been used, reduce the quantity and test the result of doing so. In most instances a groundwork of foliage is needed to start with. This is more essential if it be a stand with a broad base resting upon the cloth, upon which some of the flowers must of a necessity repose. An epergne with a tall stem requires first to be furnished with drooping foliage, and flowers too, if they are to stand. Afterwards add both foliage and flowers in unison, not all the flowers first, or *vice versa*, otherwise the proper balance of one to the other cannot be attained. I have often seen the flowers crowded together first, touching one another in fact; then to remedy this some Maiden-hair Fern fronds or Grasses or lighter flowers would be added to *lighten* the appearance, which if arranged in a more natural manner would never be too heavy. This process of lightening is absurdity itself.

#### FORMALITY IN ARRANGEMENTS

is another and a frequent mistake. The assumption that each particular flower of any given kind (be it what it may) must each have the same length of stem or be used at set distances apart, as if mathematical precision was the prime object, should not for one moment obtain; if this be countenanced there is an end to the tasteful disposal of flowers at once, and it is merely a matter of detail. To first use all the flowers with short stems and then dot others over them in a methodical fashion is also wrong; the reverse mode of procedure is infinitely better, but a combination of the two is the best plan to adopt. In making a bouquet of the all-round shape, the centre is the starting point. Let the same method be followed in arranging either tall vases or cornucopias or bases resting upon the cloth, and a better result will be secured. It is often otherwise, however, the starting point being the outer edge, with possibly just so many flowers of this and the same of that, these probably being inserted alternately.

#### THE MIXTURE OF COLOURS

is the point where many fail; in this respect it is very easy indeed to make a mistake. By all means avoid violent contrasts; scarlet and white, red and yellow, are sufficient to illustrate this. The judicious combinations of shades of one particular colour, such as the yellows, in which there is a great variety, one blending harmoniously with another, must be studied. The same occurs in the pinks as they merge into the rosy or red shades. With white flowers it is better to use soft colours rather than brilliant ones. The conditions under which a table is being decorated must also be studied; the colour of other things besides flowers has to be considered; so also

has the light. On the whole, the less use that is made of mixtures the better will be the result. One colour should prevail above others also, for if two colours in about equal quantities be used there is a want of decisive effect. Two or more shades of one colour, and of one particular flower, taking the Rose as a case in point or the Sweet Pea, are most commendable; this tends towards simplicity, which is always desirable. Between some flowers and others there is a close affinity, although not of the same family; thus stellate or star-shaped flowers blend well together. On the other hand, double and single flowers should be avoided in mixtures as far as possible. Roses with Marguerites is given as an instance of this incongruity. Single Roses look charming with Water Lilies, and so do Forget-me-nots.

#### THE SELECTION OF VASES

is not in every case that of the best, but it will be a difficult case indeed if the arrangements cannot be adapted to the circumstances. Vases which obstruct the view at the line of sight are not desirable; those with a proportionately broad base and a slender stem are easy to arrange, so as to avoid this defect. Slender stems with heavy tops should be of sufficient height to prevent any obstruction of the view. Nothing amongst colours in glass is better, or even equal to, the plain or natural colour, whilst ornamental vases, which are as ornaments sufficient of themselves, have to be arranged very judiciously, otherwise their beauty will be hidden. Where possible such vases as these are better adapted to plants than to cut flowers. Uniformity in either height or size is most undesirable; the centre-piece should be larger in every sense than the rest and its view should not be intercepted by the others. In exhibitions one often sees classes for three stands "suitable for dinner-table decorations." These—as almost invariably shown—are too nearly of one size; hence, if put upon a table with all other accessories, it can at once be seen that the outer ones are too large. It is only by experience in the actual work upon a table that a correct idea of size can be had. Too many vases are an encumbrance rather than otherwise; this will not tend to a good effect, nor will the use of a large number of smaller ones in preference to a less number of larger size. Some of the fully-laid floral decorations (only) as shown, which, of course, consist of more than three stands, are simple absurdities, no room being left for plates, dessert, or other necessary adjuncts to a properly laid-out table. Those who arrange such as these know but little of the practical detail, whilst those who place them in the prize list in preference to workable designs are equally as ignorant. Coloured drapery or cloths are the prevailing idea with some, but, personally speaking, after an experience of these, I should much prefer to do without them. Far better to depend upon the flowers for colour effect; they cannot be equalled, much less surpassed by anything artificial. Trailing sprays of such climbers as *Asparagus plumosus nanus*, *Myrsiphyllum asparagoides*, Veitch's *Ampelopsis* or *Lygodium scandens* are infinitely better than millinery embellishments. Even where they are used there is a difficulty at times to select the flowers that will harmonise with them. I had once to contend with this. One central cloth was red and another was green; between the two there was not unfrequently a difficulty. Where sprays of such climbers as those just named, or any other that may suggest itself, are used it is always possible to add a few flowers, but be moderate in their use. In every case endeavour as far as possible to use flowers in a

natural manner. We do not want to see such incongruities as *Lapageria* blooms, which after mis-spent time has been bestowed upon by wiring, standing erect, nor do *Cattleya* flowers look well with the lip upwards instead of down, nor should blooms of the Water Lily be elevated; let the last always be kept low. In the use of Orchids it is always possible to mix both diverse varieties of form and colour in the same arrangement; they have peculiar charms and harmonies not possessed by other flowers. —J. HUDSON.

## ORCHARD AND FRUIT GARDEN.

#### EARLY PEACHES.

WHEN I grew the Amsden June, Alexander and Waterloo Peaches side by side on the open wall, the Amsden June never grew so large, neither did it crop so well as the other two. Certainly the colour was darker and the flesh probably a trifle sweeter. I thought it a valuable early Peach and well deserving of wall space, but it was useless to grow the three, so I dispensed with it, giving preference to the Waterloo and Alexander. Waterloo is my favourite, as it has so far always produced an abundant crop of fine fruit both inside and outside, and if gathered at the right time and treated with some amount of caution just before ripening the flavour is very good indeed, in fact better than in some of the larger mid-season varieties. Cultivation has a great deal to do with the quality; especially is it so with these American kinds. Overcropping and too close and moist a temperature just when the fruits are ripening are two of the greatest evils. Waterloo with me under glass usually grows to a good size. Though the fruits have a great resemblance to those of Alexander, there is a wide difference in the leaf, and those who have any doubt respecting the two should examine the leaves, when the matter may very easily be settled. In the Waterloo we have very large, deeply-cut, kidney-shaped glands, usually from two to five on a leaf, quite as large, if not larger, than those of Lord Napier Nectarine. In Alexander the glands are quite the reverse, being small, some round and others cut and kidney shaped, two to four on a leaf being the rule. I have always found Waterloo the largest here, although the size varies according to the stock on which the trees are worked and the soil in which they are planted. I think sometimes a black mark is given these American Peaches when it is not altogether the Peach, but the cultivation, as frequently we meet with trees planted amongst much later kinds, and to suit the latter the former do not get air enough at the time of ripening. The fruits should always be carefully gathered a day or two before being ripe and placed on some soft material in a cool airy room to ripen up. They will not keep for any length of time, but quickly become like Williams' Pear. I should not for a moment hesitate to plant Waterloo and Hale's Early side by side for supplying ripe fruits by the middle of May. No hard forcing would be required if the trees were started by the end of January.

I was glad to read "J. C.'s" favourable remarks respecting Early York. I never knew it to fail on the open walls, and it is truly a delicious early Peach; it always grew well under glass. Hale's Early when well grown is a first-rate kind both for indoors and out, but requires great care in gathering, as the fruits frequently

clasp the shoots so tightly that much damage is done when taking them from the trees.

H. MARKHAM.

*Mercworth Castle, Maidstone.*

### MELONS.

THE season so far has been all the Melon grower could wish, and the abundance of sun will have given the fruit a rich flavour. No matter how much sun heat is obtained, without special care in the way of watering, airing, and finishing the fruits, there will be poor flavour. The fruit illustrated (Albert Victor) is a type now much grown, being of medium size, roundish, and well netted. These medium-sized fruits are much superior to large, coarse ones, some of which sadly lack flavour, the most important point in the Melon. Albert Victor can be recommended for its good qualities, free growth, and nice appearance, three important points the Melon grower must consider. I think there is less trouble with the newer varieties of Melons in the way of setting, as now most varieties set so freely there is no trouble in obtaining heavy crops. Of course, much depends upon culture. All have not the same convenience to grow the fruits, and in mixed houses there is a difficulty, as moisture at certain periods of growth is not conducive to free setting. If there is a fault, it is that some of the newer kinds grow so strongly, and do not then set so freely if given rich food or large quantities of manures as heating materials. Few fruits are raised so readily as the Melon, and few fruits deteriorate so quickly, as if several varieties are grown in one house they become so much mixed that they lose their good qualities and are flavourless. Melons cut before they are ripe rarely have the rich aroma so desirable, and fruits from plants that have been prematurely dried off cannot be depended upon for flavour. Many growers plant much too close, and by crowding do not give the plants a fair chance, as if a large grower is cramped in a small space it is impossible for it to fruit freely or set well, the crowded growths preventing the plants setting, the results being canker and insect pests. The best crop of Melons I ever saw was in a long, deep-pitched house, six plants of a new variety being grown in a space usually devoted to twenty-four, and the results were most gratifying, as there was no disease, and the plants, grown on the extension principle, were so readily managed, there was a great saving of labour and no difficulty in obtaining a second crop, the plants being clean and vigorous. Properly treated, the plants will cover a considerable roof space, and if not over-cropped at the outset, will produce three crops when top-dressed and kept clean. Keeping the plants clean in crowded, over-cropped and restricted areas is the most difficult part of culture; whereas with ample space there is greater freedom from insects, the syringe can be used to better advantage, and the work of stopping, setting and training is not nearly so troublesome. I have in these pages described a very different mode of culture to the one now advised—namely, by cordon plants, but that was for a special purpose for a catch crop; and with a deficiency of soil and root space the result was all one could desire. As the fruits were required large (being for sale), flavour was the last point considered, large quantities of liquid manure being given from the setting period. Growing Melons in a restricted space is doubtless the cause of many failures, cracking being one of the worst. Want of food and moisture

is the forerunner of black fly and red spider, and to get good results generous treatment should be given, as for Cucumbers. Melons require a stronger soil and less food at the start, but I am sure many plants are starved too much in their early stages, and better results could be secured by growing on the extension principle, cutting the fruits directly they commence to crack at the stalk.

G. WYTHES.

**The Plum aphid.**—Up to this date (June 17) Plums have been wonderfully free from insect foes, but I see they are beginning to become infested slightly with the above aphid. As this pest increases at an enormous rate and will quickly spread over all the trees unless prevented, no time should be lost in destroying this enemy immediately it is detected. Any proved insecticide applied warm will effectually settle this foe and stop its doing further mischief.—W. G. C.

**Two good Cherries for an unheated house.**—When at Mairdiffe Court, near Aberga-



*Melon Albert Victor. From a photograph sent by Mr. Ernest E. Peacock, Bewdley Villa, Bath.*

venny, recently, I was pleased to see in an unheated wall case two well-known Cherries bearing splendid crops of large, well-coloured fruit, viz., Black Tartarian and Governor Wood. Other varieties were bearing good crops, but the two named surpassed all others in every respect, and Mr. J. Newell, who now has charge of these gardens, speaks in the highest praise of their merits for planting in the glass wall cases or in unheated houses, as they rarely fail to produce heavy crops of fruit.—G. C.

**Syringing Vines.**—Unless great care is taken red spider will be much in evidence this season, especially on light soils and also perhaps where the root action is not very good. Dryness at the root and a hot and close atmosphere will soon bring red spider in shoals. Even in the best managed vineries a sharp look-out has to be undertaken. A system which I have practised ever since I had vineries under my sole charge is, during these hot and dry periods, to give the Vine leaves a good shower bath in the evening just as the sun has gone off the roof. Of course, only perfectly clear soft water must be used, and which must only be directed at the foliage, keeping the water as clear of the bunches as possible. A

careful man will soon manage this work and with no harm to the Grapes. An extra force must be put into any dry or hot corners, as here the spider generally gains a foothold and quickly works destruction. If carefully undertaken, these washings will prove most refreshing to the Vines.—A. YOUNG.

### MUSCAT OF ALEXANDRIA GRAPE.

JUDGING from my own experience and visits to other gardens during the past few weeks, this magnificent variety has set unusually well this year, and with a remarkable absence of stoneless berries. Every year I crop all the Vines heavily that are under my charge, and the remark is frequently made, "You may go on all right with most sorts, but some day you will come to grief by cropping your Muscats in that style." So far such has not been the case, nor do I think it will occur from that cause, for with ample drainage I know of no variety of Grape that will enjoy an ample supply of plant food more gratefully. At the same time I would not suggest the

use of any one particular manure, no matter how good and reliable it may have proved, for Vines can be surfeited with good fare if confined to one particular diet. Again, in the feeding of Vines there is a right and a wrong way of performing it. Of this I have seen several instances during the past few years in which the rainfall has been below the average. Many of us are too much guided by custom in watering Vines, not making sufficient allowance for the want of water in the subsoil, and for the greater evaporation continually going on in a hot, dry season like the present one; consequently the borders are much drier than one imagines, or as indicated by the surface. Supposing the border to be dry, and it is thoroughly saturated with liquid manure, or perhaps a powerful chemical fertiliser, the result is frequently disastrous, and, I believe, is a prime cause of shanking, mildew, and other evils. In the first place the roots are languishing more for moisture than for stimulants. Some varieties of Grapes will endure such treatment without any apparent ill-effects, but not so Muscat of Alexandria. I have seen the berries commence to shrivel before they were ripe, and shank-

ing suddenly set in from this injudicious application of fertilisers, but perhaps the worst instance I ever saw came before me last year. A friend, who had none too good a water supply, had a house of Muscats just commencing to colour, and, as the border had become very dry, he gave it a thorough soaking, also using diluted liquid manure, with a fairly strong dressing of chemical manure on the border. Instead of giving an extra push to the Vines, as intended, the bunches commenced to rot in a wholesale manner. If the border of the vinery is drier than it should be, it is much better to give it clear water at first, especially if planted with Muscats, and then in a few days supply something stronger; by this means no harm will be done, but much good, as the roots will be in a condition favourable for taking up the fare provided for them. In a season of drought such as we are now experiencing it is better to err on the side of too much water than too little. Of course, no hard and fast rules can be laid down as to how often Vines should be watered to keep them in a healthy, vigorous state, as soils, drainage, &c., exercise a great influence. In some cases where the soil is light and the border shallow it may be

necessary to water once a week, even when there is a good mulch of manure on, and on heavier soil, with possibly deeper borders, no watering may be needed for three weeks or a month.

As Muscats that were started in February or early in March will soon be commencing to colour, it may be stated that there should be no hurry in tying back the leaves to permit the sun to have free access to the bunches. Personally, I do not believe in the system of fixing back the foliage, for if the laterals have been kept in proper order and the growth or leaves not overcrowded, sufficient light will be admitted to give the beautiful amber colour so much prized without the risk of rusted berries, which are a great disfigurement if required for exhibition, though frequently no detriment for home consumption. Another cause of injury to Muscats is the sudden reduction of moisture in the atmosphere and the lowering of the temperature by giving front ventilation as well as at the top of the house day and night when the berries commence to colour. It would be interesting to know how much the early shrivelling of the berries could be attributed to those two influences. Over-cropping is undoubtedly a great factor in the premature shrivelling of Muscats, but I think this greatly reduced atmospheric moisture and considerable fall in the temperature are more to blame than is usually admitted. The evaporation is equally as rapid while the Grapes are colouring, and if the foliage cannot obtain sufficient moisture for the proper performance of its functions, the fruit suffers to some extent. Take the ventilation again. If the temperature has been kept up to that required by Muscats until the time for colouring, and then it is dropped 10° or 15° day and night, with possibly a draught, it stands to reason that something will suffer; yet this is done in many places. By all means admit air to the Vines, but at the same time maintain a night temperature of at least 65°, with a rise of 10° by day. Of late we have had very cold nights, the thermometer on several occasions going below freezing point. This morning (June 17) ours was down to 32°, which means that with a little top and front ventilation on the vineries a fairly good heat must be maintained in the hot-water pipes to keep up the requisite temperature. Some employers think their gardeners ought not to require fuel for the houses during the summer, but this is false economy, as it not only severely handicaps a gardener, but, owing to the fruit not being so well coloured and highly finished, it is neither so well flavoured for home use nor so valuable for market. No Grape is more delicious than well-ripened Muscat of Alexandria, and reflects the highest credit on both the employer and his or her gardener. Again, for market perfectly finished examples will command a price above all other Grapes; therefore, ladies and gentlemen possessing vineries should not grudge the necessary fuel to properly finish the crops therein, as it is certainly to their interest to supply the same.

W. G. C.

**Strawberries for forcing.**—In a short note on the value of Noble for May supplies I fear I did not make my meaning quite clear, as "S. W. F." (p. 409) advises me to try Royal Sovereign. I purchased 100 plants of the new variety the day it was first exhibited, as I saw at a glance its good qualities, and though the cost was serious at the time named, I have had no reason to repent my bargain. During the week ending June 15 I gathered so many grand fruits and of such good quality, that it has repaid handsomely for the outlay two years ago. Last season the plants promised such a heavy crop, that I removed the flowers from one half of the plants, getting a fine crop of early runners. These this season have been forced, and a portion was planted last August for early fruits, and the yield was enormous. Altogether I have given it a comprehensive trial. So far I have not found it quite so early as Noble, but it is more prolific and superior in every way. A few days at the end of May or the early part of June are of great importance to growers, and I shall still plant Noble on a

warm raised border for early dishes. I do not think any single variety has paid better than Noble in the past, but doubtless it is now superseded by the one "S. W. F." advises. In my note as to its returns, I intended to prove that it had paid grandly. Market growers, too, have assured me that Noble was their sheet anchor if specially grown, that is as yearling plants on rich land and in the most favourable position. It is strange how the variety advised varies in certain soils. If I am not mistaken, "S. W. F." lives in a favoured southern locality, where the land is noted for its rich crops of fruit. My soil is very bad for Strawberries, being shallow and on gravel, anything but good Strawberry land. Noble from yearling plants only cropped once is our earliest fruit. Royal Sovereign is six days later, but freer, and will, I hope, be equal to Noble for hardness in severe winters when we lose many of the Queen and Pine family. The most robust grower is Noble, but the Royal Sovereign is very free, bears enormous crops, is far ahead of older kinds, and will become a greater favourite on account of its having withstood the drought admirably.—W.

**Dry weather Strawberries.**—Many growers have poor soils, a small supply of water, and limited means to apply the same, and if they can grow robust varieties, there is considerable gain and less anxiety as to the crop. The season of 1893 taught us a lesson as to the value of young plants compared with old exhausted ones which soon fail in dry seasons, bear small fruits, and require much water or food to keep them alive. There is an immense gain by planting annually and giving new quarters, well prepared, as the plants in specially cultivated soil give a much better return and can be depended upon. There are a few varieties specially good in dry weather, but Royal Sovereign tops the list. The fruits this season are grand and in quantity, and young plants have done remarkably well. Another good dry weather kind is Sir C. Napier. This grows well in most soils and is not so readily affected by drought. The small, but richly flavoured Vicomtesse H. do Thury is an excellent dry weather Strawberry. It succeeds where others fail, is a great cropper, very early, and one of the best for preserving. Laxton's Latest of All is a splendid hardy variety, doing well in seasons of drought; indeed, with me it is the best late variety, and gave very fine crops in 1893 when others failed. Oxonian also thrives well; this is also known under the name of Eleanor. The same remarks apply to Kitley's Goliath, a strong grower, its chief merit being its long-bearing qualities. Doubtless there are many others; for instance, Aberdeen Favourite is good, but these named have been given a good trial, and I note their value on light land.—G. WYTHES.

**Good packing Strawberries.**—Flavour and size in Strawberries are important points, but it often happens we want a fruit that will travel well. Noble, though one of the most profitable Strawberries grown, is a bad traveller, and unless carefully packed does not look well at the end of a long journey. The new Royal Sovereign is a good traveller, as after a journey of many miles it arrives sound and without blemish. Much always depends upon the packing, as the best Strawberries when only sent a few miles present a sorry spectacle badly packed, whereas well packed fruit in small punnets quite firmly wedged together and with little top space will travel well hundreds of miles, or the fruit may be packed in layers in shallow boxes, and at a journey's end be perfect if such material as soft leaves is used, wadding being most objectionable. Many of the Pine class pack grandly, having their fruits well protected with seeds. Keens' Seedling and other dark red glossy kinds require most careful packing. Laxton's Latest of All is a splendid fruit for sending long journeys. Some Strawberries are much more juicy than others, and will not bear packing when sent long distances. President and Sir C. Napier held their own for many years on account of their good packing qualities, but some of Mr. Laxton's seedlings, of which Royal

Sovereign is one of the very best, will doubtless out many old favourites. As to the best way to pack I will not now enlarge upon, as various methods are employed. The object of this note is to point out those that have firm fruits and are suitable for sending long distances. All the varieties mentioned are also noted for their good cropping qualities.—W.

#### BLISTER ON VINE LEAVES.

WITH your permission I will make two remarks on the carefully written article on this vexed question over the well-known signature of "W. I." (p. 410). The one refers to a matter of omission, the other of commission. From first to last the writer treats the matter as one of surface treatment or ventilation, and no doubt this is often the cause of it, but at times the cause of this leaf blister lies deeper down in the roots.

Then "W. I.," in his most careful and sound advice on early ventilation, says, "a little heat in the hot-water pipes is most desirable." The sentence is carefully worded. I duly note that "W. I." writes "a little heat," but then this caution is lost when he says that this little heat in the pipes in the early morning is most desirable. What for? The writer is advocating early ventilation, that fresh air should be admitted ahead of any advance of the internal temperature of vineries through the growing power or force of the rising sun. To accomplish this task—which is more difficult in practice than it appears on paper—the less heat in the hot-water pipes in the early morning the better.

Hence—especially through spells of bright weather—I have educated my stokers into having vinery fires very low, or quite out, and the pipes cold in the morning. Should the state of the weather (or of the crops) require it, the fires are easily lit and a little or much heat sent into the water pipes as required. Of course I had other reasons for practising this cool policy in regard to the artificial heating of vineries in the early morning. I have firmly believed that most of the checks, diseases, insects, such as spider, thrips, &c., that so often dash the hopes and blight the prospects of Grape growers, originate in this mixing to excess of fire and sun heat beyond the means provided by ordinary ventilation to properly regulate or skilfully control. Of course extraordinary means are still available, such as the opening wide of doors and the slipping down or off of roof lights. But no one knows better than "W. I." how dangerous these extreme means of keeping vineries cool are, and how fruitful of blister and other accidents or diseases they are likely to be. It is safer far to have the pipes cool or cold in the morning and start each new day with such artificial heat as the weather and crops are likely to require.

D. T. F.

#### PREPARING STRAWBERRIES FOR FORCING.

WITH so many new Strawberries the desire comes to give some a trial, but as these fruits vary so much under culture in different soils, it is well to try the new kinds in various ways to find out their value. A new variety hard forced may be very disappointing; whereas a few weeks later outside it may be the reverse. Another test, and one which is most satisfactory to all concerned, is to fruit a plant or two in the open, testing its qualities by the side of well-known forcing kinds. The grower cannot expect these plants which have borne fruit to give early runners also in time to fruit the following January or February. Plants for forcing require preparation to get the best results. My plan to get plants in quantity and as strong as possible is a simple one. I layer a certain number of plants for the purpose as early in July as possible, and it matters little how they are layered whether in small pots or turves. A piece of ground is well prepared, being double-dug, heavily manured, and got into condition for planting. The plants are turned out at the end of July, planted in hard-trodden land, watered

freely as required, and make a splendid growth by the end of September or early October. Being short of space, Lettuce is planted between the rows for an autumn crop. The distance between the rows is 2½ feet, the plants half that distance apart. These are the material for next season's forcing runners. The flower-trusses are kept picked off before they expand, and by the third week in May I have runners in quantity that will be fit to layer early in June. There are great advantages in this system; the plants are not spread over a wide surface, as a few rows of plants will produce a great quantity of runners. Plants grown specially for runners will give twenty times as many as those which have to support a crop of fruit. There is a great saving of time and labour, and much better plants are the result. Purchased plants for forcing cannot be depended upon. I have had them sent home in such a small state and so late that I now

firmness of its flesh and the thickness of its skin or other causes it also bears carriage well. It is a bold venture to pit the bearing properties of the Golden Spire against the Keswick Codlin or Lord Suffield at its best. But it is a marvellous bearer under favourable conditions of culture and treatment, the fruits forming themselves into trusses more than most varieties. Few varieties form better pyramids. Thinning alike of wood and fruit and feeding are essential to continuous cropping and the production of such high quality in Golden Spire or any other Apples as shall command the highest prices in our markets.—D. T. F.

#### COVERED WAYS OF HARDY FRUIT TREES.

THIS quite practicable way of growing fruit trees and shading walks is too seldom carried

counties may see how well fruit trees do in hard walks. It is not only in kitchen and fruit gardens that such a thing would be desirable, but even in flower gardens, if we could ever get out of the strait-laced notion of a flower garden which insists on everything being seen at one glance. There is not the least reason why a beautiful arbour of fruit trees would not be most effective and welcome in various kinds of flower gardens associated with hardy flowers, or otherwise. In some old English gardens there was a habit of "plashing" trees over walks—that is to say, growing trees like the Lime over walks, which naturally grew so vigorously that they had to be repressed with an equal vigour, and this led in the end to ugliness in the excessive mutilation of the trees, as may still be seen in some old gardens. One result of the



*Covered way of fruit trees. Engraved for THE GARDEN from a photograph sent by Mrs. Newman, Hazelhurst, Haslemere.*

always resort to home-grown plants for early forcing. It is a great loss to grow your plants and then fail. Much time is taken up in going over a wide area and getting the best runners from exhausted plants, and there is much time lost in watering during growth, so that getting the plants into a certain space where layering, watering, and other details can be carried out readily is a saving when labour is none too plentiful and early forcing essential. It should also be pointed out there is no waste in any way, as the plants after furnishing the runners will the following season give splendid fruit and in quantity. S. H. B.

**The Golden Spire Apple.**—"W. G. C." estimates this variety highly in stating (p. 410) that it is more profitable and reliable than Lord Suffield, Keswick Codlin or Lord Grosvenor. Even the novelty of its spiral form seems to help, not hinder, its sale, while its golden colour gives it a market advantage over such pale-faced varieties as Keswick Codlin and Lord Suffield. From the

out. Few things would give more satisfaction if the right sort of fruit trees were selected, and by the right sort we mean kinds of the highest excellence, which do well in their several districts. Although in gardens generally the shaded walk is not nearly so necessary as it is in Italy and Southern France, or even in the warmest parts of Germany, in a season such as the present shade is as welcome here as anywhere else, and as many of our garden designers in their wisdom have given us four times as many walks as anybody wanted, there is plenty of opportunity for covering some of them with fruit trees which, well chosen, would give us much beauty in spring, handsome fruit in autumn and lightly shaded walks. The very substance of which walks are made lends itself much more to the wants of fruit trees than the soft surface of the ordinary kitchen garden, so that by this kind of fruit culture we use, as it were, the walk itself and use it well. Anybody who notices the Apricot district of Oxfordshire and the neighbouring

frequent cutting down was a very vigorous summer growth of long shoots, which cast a dense shade and dripped in wet weather. Even Apple trees may be trained over walks, and will support themselves without wires or any structure, as we once saw a perfect covered way of them in a Sussex garden. We think the purpose of such walks would be equally well answered by training fruit trees over them, as they are trees which much more readily submit to such treatment and give the light and airy shade which is best in our country.

In choosing the kinds of hardy fruit trees for this purpose, the first place should be given to the best British Apples, which are as handsome in the early year as in the fall, and give the best fruit which our country can produce. The advantage of trellis-training is, that the shoots of the tree being fixed, they escape to a great extent injury from storms, which are so frequent in the autumn, and if we get a crop of fine fruit, it is more likely to come to maturity in this way. The very hardiest kinds of

Pear, Plum, and Cherry also would do well in this way, and small fruits might be easily grown to perfection. Moreover, if the very finest kinds of small fruit were grown in this way it would be possible to protect them easily. The trellis, whatever it was formed of, need not be confined to fruit trees only, but here and there wreaths of Clematis or other elegant climbers might vary the lines.

Mrs. Newman, who sent us the photograph of the covered way of Apples from which our engraving was made, says: "The trees are trained upon iron supports, and they bear a quantity of fruit. When in full flower, with a border of Pansies and Forget-me-not at their feet, and the distance of hill and valley beyond, they are a lovely sight." In this case, as we suggest, fruit trees have been used with excellent results in the flower garden or pleasure grounds. The photograph was taken in the garden of Mr. W. Jackson at Haslemere.

## SOCIETIES AND EXHIBITIONS.

### ROYAL HORTICULTURAL SOCIETY.

JUNE 25.

THERE was a full and interesting meeting at the Drill Hall on Tuesday, not so large, perhaps, as the previous one. The Orchids were not so numerous as at the meeting a fortnight ago, but considering the hot weather and the difficulty of keeping flowers in perfection, there was a very fine display. The attendance also was good. Hardy flowers were a great feature, whilst fruit and vegetables were present in considerable quantity.

#### Orchid Committee.

First-first certificates were awarded to the following—

**DENDROBIUM ILLUSTRE.**—A hybrid between *Dendrobium chrysotoxum* and *D. Dalhousianum*. The plant partakes both in the growth and in the flower of both the parents. The sepals and petals are pale yellow, lip hairy, as in *Dalhousianum*, pale yellow in front, with a reddish brown disc. From Messrs. J. Veitch and Sons.

**LÆLIO-CATTLEYA C. G. ROEBLING.**—This, a hybrid raised from *Lælia purpurata alba* × *C. Gaskelliana*, is very distinct and beautiful; sepals and petals blush, lip deep crimson in the centre, beautifully margined with white. The throat is lemon-yellow, lined with crimson. This is a fine addition to the fine hybrids raised by Mr. Maynard at St. Albans. From Messrs. F. Sander and Co.

Awards of merit were adjudged to the following—

**LÆLIA GRANDIS TENEBROSA** (Charlesworth's variety).—An exceedingly dark form of the type and a good-shaped flower. From Mr. F. Hardy, Tarporley, Cheshire.

**LÆLIA GRANDIS TENEBROSA PITTIANA.**—A distinct form, in direct contrast to Charlesworth's var., having light yellowish sepals and petals and creamy white lip, lined with purple in the throat. From Mr. H. T. Pitt, Stamford Hill, N.

**CATTLEYA WARSCEWICZI VAR. LORD ROTHSCHILD.**—Differing from the type by having lost the characteristic white blotch in the throat, the dark colouring of the lip having absorbed the white. From Lord Rothschild, Tring Park.

**ORCHIS LATIFOLIA** (Glasnevin var.).—Differing from the type by its larger flowers and finer colour. From Mr. F. Moore, Glasnevin.

Botanical certificates were awarded to the following—

**DENDROBIUM INVERNUM.**—A small-growing and most distinct species, having flowers of the same size and as near as possible of the same colour as in *Lælia cinnabarina*. From Mr. J. Bradshaw, Southgate.

**PLEUROTHALLIS IMMERSA.**—A distinct and pretty species, with hairy, creamy white flowers. From Mr. R. I. Measures.

Messrs. J. Veitch and Sons had a very fine group consisting of many of their rare hybrids and other scarce species, amongst which were *Cattleya Schrederiana*, a natural hybrid between *Cattleya Walkeriana* and *C. superba*, L.-C. *Arnoldiana*, *Cattleya Gaskelliana alba*, *C. Mossie Wagneri*, L.-C. *Canhamiana alba*, *Epiphronitis Veitchei*, *Celogyne Dayana* carrying six fine spikes of flower, *Dendrobium glomeratum*, *D. illustre*, mentioned above, *D. Dearei*, *Miltonia vexillaria* in variety, two fine plants of *Disa Veitchei*, *Oncidium macranthum*, *O. phymatochilum*, *O. longipes*, *Odontoglossum hastilabium*, a fine variety, *O. crispum*, *Cypripedium Harrisianum superbum*, *C. Artemus*, *C. Curtisi*, a fine dark variety, *C. superbiens*, *C. orphanum*, *Cataseum tubulare*, *Thunia Veitcheiana*, a specially fine variety with deep rose sepals and petals and a fine dark lip, *Brassia verrucosa*, *Oncidium pulvinatum*, *Cattleya Warscewiczii*, *C. Mendeli*, *Epidendrum reniferum* and *Epidendrum vitellinum majus*. A silver Flora medal was awarded.

Mr. F. Hardy, Ashton-on-Mersey, Cheshire, was also awarded a silver Flora medal for a very fine and well-grown lot of plants, prominent among which were *Cattleya Mossie Hardyana*, a form of *C. Mossie Wagneri*, L.-C. *Arnoldiana superba*, L.-C. *Stella*, *L. grandis tenebrosa*, a fine plant carrying twenty-five fine dark flowers, *Sobralia macrantha alba*, *Sobralia Kienastiana*, *Cypripedium macrochilum* with three fine flowers, *C. Gowerianum superbum*, *Lælia grandis* (Charlesworth's var.) mentioned above, and some good forms of *Cattleya Mossie*.

Mr. H. T. Pitt, Stamford Hill, sent a pretty group, consisting principally of *L. grandis tenebrosa*, the variety *Pittiana* (noted above) standing out prominent amongst them. *Miltonia vexillaria rubella*, *M. Roezli*, a fine var., *Cypripedium Chamberlainianum*, some fine forms of *Odontoglossum crispum*, *Oncidium phymatochilum*, with a fine branching spike 5 feet long, and *Angraecum falcatum* were also included. A silver Banksian medal was awarded. J. Gurney Fowler, Glebelands, Woodford, sent some choice things, noteworthy among them being the *Walton Grange* var. of *Lælia grandis tenebrosa*, with its beautiful golden yellow sepals and petals and white blotch on the front of the lip; also a fine plant of L.-C. *Arnoldiana*, carrying two spikes with four flowers each; L.-C. *eximia*, with two flowers; and *Cypripedium Rothschildianum*. A silver Banksian medal was awarded. Messrs. Hugh Low and Co. were also awarded a silver Banksian medal for a small group, consisting of *Odontoglossum crispum* in variety, two plants of the new hybrid *Cypripedium Gertrude Hollington*, *C. Curtisi*, two plants carrying six flowers each, a fine *Cattleya Warscewiczii* with an extra large and intensely dark lip; *Celogyne pandurata*, with its distinct green petals and black lip; *Odontoglossum Lanceanum* and *Grammatophyllum Measuresianum* carrying a fine spike. Messrs. F. Sander and Co. had a small but choice group, amongst which were *Lælio-Cattleya C. G. Roebling*, described above, *Thunia Bensonae grandiflora*, *Cypripedium A. de Lairese*, a hybrid between *C. Curtisi* and *C. Rothschildianum*; *C. Dayano-Lowianum*, a hybrid in the way of *C. luridum*; *C. Kimballianum*, a supposed natural hybrid between *C. Rothschildianum* and *C. Dayanum*; *Cypripedium Massaianum*, the first hybrid raised in which *C. Rothschildianum* had been used as a parent; a very fine variety of *Cattleya Rex*, *C. Mossie* with a fine dark lip, *Cirrhopetalum picturatum*, *Lælia præstans*, and *Odontoglossum Galeottianum*. Mr. T. M. Burton sent *Cypripedium Burtoni*. The same cross had been shown by Mr. Hollington previously under the name of *C. Millmani*. Mr. T. Statter, Stand Hall, Manchester, sent a small group of rare and fine varieties, among which was the best form we have seen of *Lælio-Cattleya Canhamiana alba* with two flowers, L.-C. *eximia*, two fine varieties of *L. grandis tenebrosa*, *Cypripedium Rothschildianum*,

*C. Harrisianum superbum*, and *C. selligorum majus*. Mr. De B. Crawshay, Rosefield, Sevenoaks, sent *Lælia purpurata Venus*, a distinct and delicate form, and *Odontoglossum crispum Crawshayanum*, which had previously received an award of merit. Mr. A. J. Hollington, Forty Hill, Enfield, sent *Cypripedium Millmani* and *C. Aylngi*, one of the finest *Cypripediums* that has been raised, and a seedling *Cattleya* not named. Messrs. Charlesworth and Co., Heaton, Bradford, sent *Cattleya Mendeli* (Charlesworth's var.), in the way of *C. Mendeli Morganii*, but with larger flowers. W. Cutbush and Son, Highgate, sent *Odontoglossum crispum Niobe*, a well-shaped flower, with large brown blotch on lip. Mr. J. Foster Alcock sent *Gongora cassidea* bearing two fine spikes of flower.

#### Floral Committee.

First class certificates were granted to the following:—

**PHILADELPHUS BOULE D'ARGENT.**—This is one of a series of hybrids raised by M. Lemoine between *P. microphyllus* and *P. coronarius*. It resembles the former in habit of growth, being dwarf with erect shoots that are wreathed in flowers their entire length. The flowers are semi-double and intermediate in size between those of the two parents. Shown by Messrs. T. Cripps and Son, Tunbridge Wells.

**ECHINOCACTUS AUREUS.**—A most distinct variety of the Porcupine Cactus that will become popular now that more attention is being given to these plants. It is entirely covered with long spines, which are of a clear yellow colour. From Messrs. Sander and Co., St. Albans.

Awards of merit were granted to the following:—

**BEGONIA PRINCE ADOLPHUS OF TECK.**—A rich crimson self, the flower of medium size, with smooth flat petals. From Messrs. Laing and Sons.

**BEGONIA J. T. BENNETT-POE.**—This is of a light scarlet colour, with flat outer guard petals and a full centre. Also from Messrs. Laing and Sons.

**CALOCHORTUS VENUSTUS PICTUS.**—Another charming addition to this lovely family. The flowers are a little smaller than those of the type, but neatly shaped, of a purer white, with rosy spots at the base and the characteristic brown blotch on each petal. Shown by Messrs. R. Wallace and Co., Colechester.

**CARNATION COWSLIP.**—This has a fine flower of perfect shape, and is yellow, edged and flaked with bright rose. Shown by Mr. Martin Smith, Hayes.

**CARNATION LADY RIDLEY.**—A white self, with a full, well-formed flower, but it did not appear better than other white kinds. This also came from Mr. Martin Smith.

**CARNATION GEORGE CRUICKSHANK.**—This has a large flower, which is buff, flamed with scarlet, this latter colour predominating to the extent of making the flower appear almost self-coloured. Also from Mr. Martin Smith.

**CARNATION ZOE.**—A pretty variety of a most distinct shade of pink, practically a self, having only a few tiny dots of light purple on the petals. This also was from Mr. Martin Smith.

**LILIUM DALHOUSIANUM.**—This handsome hybrid Lily, whose parents were *L. dalmaticum* and *L. Hansonii*, is now well known, and a coloured plate of it was given in *THE GARDEN* of September 16, 1893, p. 260. A fine spike of it was shown by Mr. T. S. Ware, of Tottenham.

**PEONY MME. DE GALHAN.**—A charming herbaceous variety with a graceful loose flower, the outer petals rose-pink, shading to flesh, with a creamy white centre. From Messrs. Paul and Son, Cheshunt.

**TUFTED PANSY A. J. ROWBERKY.**—This is a fine addition to the rayless varieties and most valuable because of its deep rich yellow colour. It is the finest yellow self yet raised. Shown by Mr. G. McLeod, Chingford.

**POTENTILLA CALIFORNICA.**—Though by no means a new plant, it appeared as such to many who saw

and appreciated its beauty for the first time. A large bunch was shown, the flowers full, double, and very large, of a rich yellow colour, slightly tipped with red. Shown by Mr. M. Prichard, Christchurch.

**SWEET PEA CUPID.**—A miniature variety of which nine pots were shown, the shoots being about a foot long and profusely flowered, the flowers pure white and as large as those of the ordinary forms. We fail to see the value of this, which is a poor apology for a noble garden flower, and nothing will be gained by dwarfing Sweet Peas into comparative insignificance. The craze for a pigmy strain of our best garden flowers is to be deprecated. It was shown by Mr. Burpee, of Philadelphia.

The group of hardy flowers from Messrs. J. Veitch and Sons was most prominent, Delphiniums largely predominating, the spikes very finely grown and flowered. Some of the best were Agnes, light purple; Lord Balfour, purple and blue; Nahamah, deep blue; Lord Charles Beresford, light blue; Minerve, light blue and mauve-purple. Among species *D. nudicaule* was finely shown, also *D. eschmerianum* and *D. grandiflorum plenum*. Early Phloxes and Campanulas were also good. They also showed cut Roses in quantity, Teas and Hybrid Perpetuals making a fine display. A silver-gilt Flora medal was awarded. Mr. Ware's group of hardy plants filled much space, and his method of grouping each variety by itself is much to be preferred to the conventional way of indiscriminately mixing everything shown. In this group Lilies were well shown, especially *L. colchicum*, *L. pomponium*, *L. testaceum* and *L. Dalhousii*. *Brodiaea coccinea*, *Lychnis vespertina plena*, *Eryngiums*, *Delphiniums* and *Alströmarias* were all noteworthy. A silver Flora medal was awarded, and a similar award went to Mr. M. Prichard, of Christchurch, for a fine group of the best hardy flowers in season. *Delphinium belladonna*, *D. nudicaule*, English Irises, *Oenothera speciosa*, *Potentillas*, *Chrysanthemum maximum* M. Prichard, *Spiraea astilboides floribunda*, most profuse in flower, *Scabiosa caucasica* and *Orchis foliosa* were all well represented here. Messrs. Jackman and Sons showed hardy flowers in quantity, noteworthy being their *Delphiniums*, the scarlet Bee Balm, *Linaria dalmatica*, *Oenothera fruticosa* and *Iris Kampferi* in variety. Roses (both Teas and Hybrid Perpetuals) were also shown, and a silver Banksian medal was awarded. Messrs. Barr received a similar award for one of their characteristic groups, comprising many good things not shown elsewhere, as *Iris Monspur*, a noble, tall, late-flowering kind, of distinct and striking beauty. It is a garden hybrid between *I. Monnieri* and *I. spuria* and a plant that one should have a bold group of. A coloured plate of this was given in THE GARDEN of November 15, 1890, p. 462. *I. aurea*, *I. ochroleuca*, equally tall and handsome, were shown well; also *Eryngiums*, *Linarias* and the great *Senecio macrophyllus*. Messrs. R. Wallace and Co. showed *Calochorti* in larger quantity than they have ever done before, and the group was quite a centre of attraction. The varieties of *C. venustus* were most numerous on this occasion, and in addition to the kind that received the award of merit we noted *C. v. ocellatus*, a tall, robust form; *C. v. Vesta*, very handsome, with a large reflexed flower; *C. v. Vesta albus*, a perfect gem, creamy white, with sulphur base, free from any spot or blotch; *C. roseus*, a rose-tinted form, and the brilliant scarlet *C. Kennedyi*, which was figured in THE GARDEN February 11, 1893, p. 108. English Irises were well shown, also *Brodiaeas* in variety, including the curious climbing *B. volubilis*, and *Liliums*, the varieties of *L. elegans* being numerous in several most distinct and striking colours. A silver Banksian medal was awarded. Messrs. Cutbush and Sons received a similar award for a very fine group of Malmaison Carnations, the plants in pots carrying splendid flowers.

Roses and hardy flowers were shown by Messrs. Paul and Son, the Roses mostly free-flowering garden kinds, also new and old single varieties

such as Carmine Pillar, especially rich in colour; Reine Blanche, a lovely variety of cupped form and creamy white with rose tipped buds; R. Andersoni, deep clear rose colour, distinct and striking; R. macrantha, blush, shading to white with extra large flowers; R. moschata alba and others, all most desirable sorts that ought to be common in our gardens. A bronze Banksian medal was awarded. Messrs. Dobbie and Co. exhibited a fine group of show, fancy and tufted Pansies and Sweet Peas all grown at their new nursery in Kent. The Pansies were remarkable alike for their fine size and freshness in spite of the tropical sun that has daily shone upon them. The Sweet Peas were also good, all the best new and old varieties being shown. We made note of Orange Prince; Firefly, bright red; Mrs. Eckford, the nearest approach to yellow yet raised; Blanche Burpee, Emily Eckford, and the good old Princess Beatrie, not yet surpassed in its particular shade. A silver Banksian medal was awarded. Messrs. Cheal and Sons, of Crawley, received a bronze Banksian medal for tufted Pansies in quantity and hardy flowers.

Cactaceous plants were represented by two large groups, but only one was entered for the prizes offered, the first prize being awarded to Mr. W. C. Ludford, Fernlea, Four Oaks, Sutton Coldfield, Birmingham. Many kinds were shown, but hardly any in flower. Messrs. Cannell have evidently turned their attention to this class of plants, and they showed a very extensive group, to which a silver Flora medal was awarded. Other exhibits were *Pelargonium Henry Jacoby* in double form from Mr. Cannell, Philadelphia; *Lemoinei* from Mr. A. Waterer, a flowering branch of *Ficentia californica* from Mr. F. W. Moore, Glasnevin, new garden Roses from a variety of crosses from Lord Penzance, a buff-coloured self Carnation named Lady Penzance, and *Dipladenia atropurpurea* from Messrs. Sander and Sons. Mr. G. Farini showed double *Begonias* in a most ugly way, the blooms in tubes on the conventional green boards without a leaf or foil of any sort. Mr. W. Taylor, of Hampton, showed a new crimson Rose named Robin Lyth, and *Delphiniums* were shown by Mr. Mann, gardener to Mr. C. E. Thompson, Penhill, Cardiff. Messrs. Coops, of Tunbridge Wells, showed a quantity of *Hypericum Moserianum* tricolor and a variegated variety of *Daphniphyllum glaucescens*.

The prizes offered for hardy flowers did not bring out much competition. Mr. G. H. Sage, of Ham House, Petersham, was first for twelve bunches. He showed *Delphiniums*, Irises, Iceland Poppies, *Centaurea macrocephala*, *Paeonies*, *Campanula persicifolia*, *Lathyrus latifolius*, Lilies, *Oenothera Fraseri*, *Chrysanthemum maximum*, *Eryngiums* and *Potentillas*. For eight bunches, Mr. C. Herrin, The Gardens, Dropmore, was first, his exhibit containing good bunches of *Verbascum vernale*, *Clematis recta*, *Campanula persicifolia* and *Delphiniums*. Miss Debenham, St. Peter's, St. Albans, was second. For twelve spikes of *Delphiniums*, Mr. A. Crossman, gardener to Mr. J. Brutton, Yeovil, was first with a good exhibit of five spikes, the best varieties being Duke of Teck, Ultramarine, Agnes Kelway, Lorenzo and David. The same exhibitor was also first for twelve bunches of herbaceous *Paeonies*, this being the only lot forthcoming, as owing to the heat and drought they are mostly out of flower now in gardens.

#### Fruit Committee.

The work of this committee was heavier than usual, Melons being shown in quantity. Tomatoes were good and Strawberries equally numerous. Good collections of Pine-apples and vegetables were staged.

A first-class certificate was awarded to—

**STRAWBERRY MONARCH.**—A very fine wedge-shaped fruit, beautiful in colour and firm in flesh. It is a cross between Latest of All and Captain, and partakes of the British Queen flavour, but is more robust, a heavy cropper, and does well on

light soils. From Messrs. Laxton Brothers, Bedford.

Awards of merit were given to the following—

**MELON BISHOP'S FAVOURITE.**—A white-fleshed fruit, above medium size, slightly netted, and with a good depth of flesh, very sweet and well flavoured. This was sent by Mr. A. Bishop, Westley Hall Gardens, Bury St. Edmunds, Suffolk.

**PEA CARTER'S DAISY.**—This is one of the very best types of dwarf marrow Peas grown. It has large pods containing seven to nine Peas, is a heavy cropper, grows 18 inches in height, is an excellent dry weather variety, and valuable as a second early. Shown by Mr. G. Wythes, Syon House Gardens, Brentford.

A dozen very fine Queen Pines with scarcely any top were staged by Mr. Coomber, The Hendre Gardens, Monmouth, the fruits being well ripened, of bright colour, and very even all through. They were much admired, and a silver Banksian medal was awarded. Messrs. Fellows and Ryder, Orpington, Kent, staged a dozen plants of the new Duke of York Tomato laden with large fruits of first-class quality and fine colour. It is a most prolific kind, and certainly one of the best new kinds since the advent of Perfection. A silver Banksian medal was awarded. Messrs. Laxton Bros. showed fifty dishes of Strawberries, including most of their new varieties, Leader and Monarch being specially fine. Royal Sovereign was also good. The dishes of Competitor, Commander, Waterloo, and Latest of All were noteworthy, and mention must be made of Unser Fritz, Admiral Dundas, Auguste Nicaise, Scarlet Queen, Kimberley, and some of the Pine section.

From the society's garden, Chiswick, Mr. Barron staged trusses of growing fruits (about a dozen), including some varieties rarely seen. Among them we noted Princess Royal, Leader, Glengary, Bothwell Bank, Dr. Vaillard, Acquisition, Souvenir de Bessent and Dr. Morere. Mr. R. Gilbert, Burghley Gardens, Stamford, showed some remarkable fruits of Royal Sovereign of high quality, the flavour being all one could desire. A cultural award was deservedly given. Mr. Collis, Bollo Lane, Chiswick, staged May Queen Strawberry in nice condition. Messrs. Cannell and Sons, Swanley, sent very good Royal Sovereign; and Messrs. Rivers, Sawbridgeworth, sent nice dishes of the Early Rivers Nectarine, from pot trees grown in an intermediate house. Rarely have so many Melons been staged, and, considering the favourable season, none were remarkable for high flavour; many were good, but not superior to existing varieties. Mr. G. Norman, Hatfield House Gardens, Herts, showed large, bright fruits of Hatfield Scarlet, somewhat like Blenheim Orange, deep flesh and well netted. A cultural commendation was given. Mr. Mortimer, Rowledge Nursery, Farnham, received a cultural commendation for twenty-four very finely-netted, medium-sized fruits of Eclipse, a variety which received an award of merit last season. From Mr. O. Thomas, Royal Gardens, Frogmore, came the Duchess, a new white-fleshed kind, but over-ripe. Mr. G. Wythes, Syon House, Brentford, sent two seedlings—Champion, a fine fruit not quite ripe, and the Gem, a small pale green variety. Mr. Bishop also sent other seedlings in addition to that certificated. Mr. Brooks, Red Rue, Andover, Mr. Johnson, Duffield House Gardens, Stoke Pogis, Mr. Ashton, Glossop Hall Gardens, Derby, Mr. Ward, Longford Castle Gardens, Salisbury, also sent seedling Melons; the last-named sent one named the Earl, which was given an award late last year.

Vegetables occupied considerable space. Messrs. Veitch, of Chelsea, sent a very fine collection of Cabbages and Peas. The Cabbages had good compact heads, the best being Ellam's Dwarf, Nonpareil Improved, Little Pixie, very nice for table; Veitch's Maincrop, a market form, and very large; Early Offenham, a conical variety. Earliest of All, Veitch's Matchless, Early Dwarf, York, very compact habit; Early Market, Enfield Market, Large York, a loose kind, an

Hardy Green Curled. Peas in eighteen varieties were shown with dates of sowing and gathering, the earliest varieties being Exonian, Veitch's Early Marrow, Laxton's Alpha, Dr. Hogg, and Chelsea Gem, these being fit the middle of June from outside sowing; Wm. Hurst, Gradus, Excelsior, and William I. were also good. Mr. Wythes also showed Peas, the varieties being Stratagem, very fine; Webb's Senator, a new variety with a full pod, much curled; and Daisy, already described; also a very nice lot of Veitch's Early Foreing Cauliflower, with medium sized, pure white, firm, compact heads, grown in thirteen weeks from time of sowing the seed. Mr. Ward sent a nice collection of Peas, receiving a cultural award, the varieties being Daisy, Stratagem, Carter's Favourite, and Telephone. Messrs. Mortimer and Thomas sent new Cucumbers, which the committee desired to be sent to Chiswick for trial next year. Messrs. Carter, High Holborn, sent two varieties of Spinach, the new Carter's, given an award last meeting, and the Long-standing, an older form, to show the difference in the two varieties. Mr. G. W. Cummins sent Runner Bean Ne Plus Ultra grown in pots. The new Excelsior Tomato, given an award last meeting, was again shown by Mr. Corbett, Mulgrave Castle Gardens, Whitby. Mr. R. Filkin, Christchurch, sent Potato Queen of the Earlies, Early Laxton and Maggie being sent for comparison. The Queen is very early, and has a good tuber, but no award was given, as the best test is a trial at Chiswick.

The lecture was by Professor Henslow, who kindly undertook to fill the vacancy caused by the unavoidable absence of Mr. W. T. Thistleton-Dyer. He greatly interested a numerous audience with interesting facts and peculiarities concerning many of the plants and flowers exhibited that day. He alluded to the great Cactus family as an instance of plants adapting themselves to their environment, for although the family contained many species of wide botanical differences, there was a wonderful similarity of aspect about them as a whole, and necessary, because either by their tough skin, or armour of spines, or mantle of hairs, they prevented the evaporation of their own juices and were able to subsist in the aridity of their surroundings. Even representatives of the Spurge family took the same succulent habit of growth in desert regions, and in outward aspect looked a different race of plants to the Spurges of our own woods. He showed coloured illustrations of the earliest types of the tuberous Begonia and compared them with the latest varieties shown that day, remarking incidentally that no future controversy could ever arise such as has been going on regarding the origin of the florist's Cineraria, as we knew the early types, and all the work that had been done with them was chronicled. The present type of Gloxinia that found most favour in gardens was that with a regular erect flower, which again was of garden origin, but represented, he thought, the reappearance of some latent trait, as botanically what we know as the wild type with a drooping flower had only four stamens, and was an irregular flower which cultivation had restored to regularity. Many other flowers he discoursed upon in the same pleasant and instructive way. More lectures of this sort might with advantage be given, alternating with those confined to one specific subject, if we may judge by the cordial way in which this one was received.

The Nurserymen, Market Gardeners' and General Haulstorm Insurance Corporation, Limited.—The statutory general meeting of this corporation was held at Simpson's, Limited, Strand, on Friday, June 21, 1895. The chairman (Mr. Harry J. Veitch) reported that the shares had been applied for freely, thus providing perfect security for policy-holders. Though established only four months, 100 policies had been issued on 6,720,832 square feet of glass, valued at £80,542 2s. 6d., and producing £415 11s. 6d. in

premiums. This amount would be considerably augmented by the Midsummer and Michaelmas business. No claims had yet been received. The capital had been invested in Government stock; twenty-six agents had already been appointed in the United Kingdom. The corporation was being worked with economy and was making good progress. The directors would take no remuneration in any year when less than 5 per cent. on the subscribed capital was made, and then only such sum as the shareholders in general meeting voted to them. From the tone of the meeting the report was considered very satisfactory. Messrs. Harry J. Veitch, James Sweet and James Webber were appointed trustees, and the meeting closed with a unanimous vote of thanks to the chairman.

## NOTES OF THE WEEK.

*Anemone rivularis* is a fine summer Anemone to which all who have a little bog or a moist nook in the rock garden should give a place. At Kew it is flowering strongly and well in quite an elevated position, its stout flower-stems nearly 2 feet in height, freely branched, and bearing many white flowers.

*Mertensia virginica*.—On page 447 "M. P." calls attention to the above plant. At the present time *M. virginica* is quite dormant, while a few yards away *Mertensia sibirica* and *M. paniculata* are in bloom. I should certainly say that the plant mentioned in THE GARDEN June 8 and 15 must be either *M. sibirica* or *M. paniculata*.—W. H.

*Wahlenbergia graminifolia* is found to be one of the easiest of this little race of Bell-flowers to grow at Kew, and it is now flowering there. The plant has a centre tuft of narrow grassy leaves and prostrate flower-stems which radiate from the centre, each terminated by a dense head of purple-blue flowers clustered like those of *Campanula glomerata*.

*Escallonia Phillipiana* has withstood the past winter in the open at Kew. It is one of the hardiest species, much hardier than those commonly planted, namely, *E. macrantha* and *E. rubra*. It makes a pretty mass or group on the turf, throwing out its shoots in a pretty arching way, clothing them in an abundance of small deep green leaves, and now the shoots are wreaths of tiny white blossoms like sprays of tiny Daisies.

*Moltkia petraea* is a pretty dwarf shrub now in flower in the rock garden at Kew. In growth and leafage it so much resembles Lavender, that one might take it for such when not in flower. Now, however, it is most distinct from Lavender and everything else, the little bushes covered with flower-spikes. The flowers, disposed in dense short spikes on stems about 6 inches long, are of a deep blue colour with exerted stamens of a reddish hue.

An abnormal Foxglove.—I am sending you by post a Foxglove which has such a curious blossom, that I think you may possibly like to see it. I have had two, if not three, other Foxgloves with similar blossoms at the top of the spikes, but none nearly so large as this one, which is 3½ inches in diameter. I raised these Foxgloves from seeds. The great majority have come up with the ordinary blossoms only.—LEONORA SCOTT, Malabar House, St. Albans.

*Brassia verrucosa*.—I send you a raceme of *Brassia verrucosa* cut from a plant bearing eighteen similar racemes with fifteen to sixteen blooms on a raceme. I also send you a couple of blooms of *Cypripedium barbatum* from a plant bearing forty blooms. I also enclose two blooms of a *Cypripedium* with a nice whitish dorsal sepal. The plant is bearing thirty-six blooms, and makes a handsome specimen.—J. F. WILKINSON, Highlands, Amberley.

*Solanum Wendlandi*.—A climbing plant that will succeed under the arid conditions essential for the growth of Cacti must surely be useful

in many gardens. Certainly none could fail to admire this magnificent plant as now flowering in the Cactus house at Kew, where it is trained to the roof, and produces an amazing profusion of richly coloured blooms. A coloured plate of this plant was given in THE GARDEN of Feb. 1, 1890, p. 104.

*Eremostachys laciniata* is a vigorous perennial belonging to the Sage family, but looking like a cut leaved *Acanthus* with its robust erect spike, of which the upper half is crowded with flowers. The flowers are of a greenish colour streaked with pale purple, but the conspicuous part of them is the lower petal or lip, which is of a rich dark velvet-crimson hue. It would be well worth while growing it in shade to preserve its colour till it faded naturally.

*Epilobium obcordatum*.—This is a native of the Rocky Mountains and a pretty plant for the rock garden, dwarfed doubtless because it was essential to do so to adapt itself to its natural environment, but preserving at the same time all its beauty of blossoms. It has a low spreading habit of growth, the shoots clothed with short broad leaves and the large flowers of a bright rosy crimson colour, each petal deeply cut into two lobes. It is flowering at Kew.

*Genista virgata*.—This pretty Broom is rarely seen outside of botanic gardens. At Kew it is now flowering freely, and established plants appear to have suffered little from the past winter. A mass of it has a lovely effect that is visible from a considerable distance, as the older specimens in the group are more than 12 feet high and have thick tree-like stems. The flowers in size and rich colour resemble those of *Cytisus racemosus*, but the racemes are shorter and borne freely.

*Syringa japonica* now flowering at Kew is a very graceful species, and if it will only flower as freely as other Lilacs it will be a most valuable sort for succession, as it is even now only opening some of its flowers, whilst those of all other kinds have long faded. The flowers are tiny individually, cream-white, with exerted yellow stamens that give a peculiar charm to the plant, but what they lack in size they make up in numbers, being thickly disposed in large, much-branched racemes that hang lightly upon the bush.

*Rosa Bruceana*.—Anyone searching for a beautiful single Rose that would climb a tree or quickly cover any crevice about the garden would not long be undecided if he saw the great plant of this Rose near the succulent house at Kew. Its main stem, trained to or grown up with other things, must be nearly 20 feet high, and it throws out in all directions long, arching shoots, having soft grey-green leaves and myriads of flowers in thick clusters. Their effect in the bright sun, the air laden with their fragrance, is something to remember, but by no means possible to describe.

*Rhododendron cinnabarinum*.—We have some fine plants of *Rhododendron cinnabarinum* in flower, and I thought you might like a few blooms from a plant about 16 feet or 17 feet high with some hundreds of flowers on it.—R. G. LAKES, Travarrick, St. Austell.

\* \* This *Rhododendron* was figured in THE GARDEN of March, 1879. It also does well in the neighbourhood of Dorking, and many fine plants exist in the west of England, but we think it is hardly suitable for general cultivation, as it undoubtedly wants a warm and sheltered situation. In such a place, however, it is well worthy of a trial by those who are fond of this class of plants.—ED.

Water Lilies at Kew.—One of the most interesting houses at Kew is that devoted to Water Lilies and other aquatic plants. At the present time there is a fine display of colour from many flowers of *N. Lotus* and *N. stellata*, in white, crimson and deep blue shades. We saw *N. Marlacea carnea* and *N. Leydekeri* flowering in the same tank, but scarcely happy there, the former not nearly so large as with us in the open air; and

N. Leydekeri seemed to lack that glow of bright colour which in the open water makes it so visible and brightly effective, even seen from a considerable distance. There are now so many noble hardy kinds that they ought to be represented at Kew growing in some open water where, without the least doubt, they would have thousands of admirers who as yet know them not in their newer and richly-coloured forms.

**Vegetables at York show.**—Some grand vegetables were shown at York on the 17th in competition for the prizes offered by Messrs. Webb and Sutton and Sons. In Mr. Crawford's collections, which won the first prize in both classes, that fine old Pea Stratagem was seen in grand form, it being of a much deeper green colour than the larger pods of Sutton's A 1 shown by Mr. McIndoe. The good old Watcheren Cauliflower was well represented, as were also Canadian Wonder Bean, Leviathan Onion, Market Favourite Carrot, the last being of large size for the time of year and of a bright colour. Sensation and Reading Perfection Tomatoes were also conspicuous in the various exhibits, and a fine bundle of late Argenteuil Asparagus gave great strength to one of Mr. Crawford's collections.

**Notes from Chester.**—It is Midsummer day. It looks it and feels like it without reference to the calendar. If at the early part of the spring-time there were grounds for the assertion that the season was late, Flora, impressed with the fact, seemed to quicken her pace, and everything is brought up to line by the time we have reached the longest day. The flowers and leafage everywhere are abundant and beautiful. It is not the sense of sight alone that is gratified. Amongst the Philadelphus bushes to day the perfumery of Nature forces itself upon the attention. In witness whereof place the two sprays beside you as you take them from the box of specimens just posted to you. *Philadelphus hybridus Lemoinei* is, as you will see, a beautiful variety of the Moek Orange, whilst *Philadelphus microphyllus* is as dainty a piece of graceful combination as you could wish to see. Then the *Clerodendron*, with its creamy Lychnis-like flowers, its inflated calyx like a piece of carved coral, and its long graceful stamens. What more delightful aroma could be found? For form, too, the *Zenobias*, seem to combine the characters of the *Erica* with all that is daintily beautiful in the chaste bells of the *Lily of the Valley*: are not these each charming in their way? We send you *Z. pulverulenta* and *Z. cassiniifolia*. There are some lovely *Deutzias* out now. The *Pride of Rochester*, a grand double-flowering variety, is enclosed, and may be taken as a representative of some other plants of this beautiful family flowering so freely. The *Clematises* are just coming to the front in their rich clusters about the pillars that

afford them the support they need. The beautiful form *integrifolia* var. *Davandi* we send to-day. Its rich purple is most effective against its healthy profusion of entire leaved foliage. *Escalonia Phillipiana* we also send a splendid piece of in pink and white with foliage suited to its floral arrangement.—DICKSONS.

## PUBLIC GARDENS.

**Plumstead Common fired.**—For the greater part of yesterday a fire was raging on Plumstead Common. The flames broke out about half-past ten in the morning, and spread with such rapidity, that in less than a couple of hours five acres of Furze and bushes were blazing. It was not until evening that the fire burnt itself out. This is the third fire which has occurred on the common during the present week.

**Brockwell Park.**—The Parks Committee recommended that £1470 should be expended in the construction and drainage of footpaths, the formation of two ornamental ponds, shrubberies, and a rivulet, the erection of rustic bridges and wire-fencing to the paths, and boundary fencing and gates at Arlingford Road. The land upon which this new entrance is to be erected will shortly be in possession of the council, and the work will be commenced without delay. Opposition to the scheme came from Dr. Longstaff, Mr. John Burns, and one or two other members, the ground of objection being that the cost was excessive. As chairman of the Parks Committee Mr. Fletcher showed that this was not the case, the proposed expenditure being quite within the scale of previous undertakings of the same kind. The council adopted the Parks Committee's recommendation by a substantial majority.

**The weather in West Herts.**—During the present month there have been as yet only five days in which the highest temperature in shade has been below the mean for the time of year, but, on the other hand, most of the nights have been more or less cold for the season. The three hottest days were the 9th, 23rd and 25th, when the readings in shade rose respectively to 80°, 80° and 79°. At the depth of 1 foot the soil temperature stands at 68°, which is 7° in advance of the June average, and 5° warmer than at the same date last year. The total fall of rain for the last six weeks amounts only to about a quarter of an inch; whereas a seasonable fall for the same period would exceed 3 inches. The ground is exceedingly dry; in fact, not a drop of water has come through the heavy soil gauge for a month or through the light soil gauge for six weeks. The air also still continues remarkably dry. On the 20th the difference at 3

p.m. between the dry and wet bulb readings amounted to 17°, and on the 25th to 20°. The well-known Hybrid Perpetual Rose Marie Baumann first flowered on the 24th, or, with the exception of 1893, earlier than in any of the seven previous years.—E. M., *Berkhamsted*.

## COLLECTING HARDY PLANTS.

TO THE EDITOR OF THE GARDEN.

SIR,—I write to know if there are other amateurs, caring for herbaceous and alpine plants, who would like to join and send out a collector to some of the still unexplored parts of the world. Nurserymen cannot afford to do this except in the case of Orchids and similar high-priced greenhouse things. But if fifty of us were to subscribe £10 each we could probably do anything we wanted in the Southern Andes, Alaska, or anywhere else we chose. Of course it would not pay from a business point of view, but it would give us a world of interest and pleasure raising the new seeds and bulbs, and would almost certainly give us a few things which would permanently enrich English gardens. I write in great ignorance of this matter. It may be the expenses would be much more than I think. It would be very interesting to hear what those who know about such enterprises can tell us. Anyhow, I would gladly risk £10 myself. And if it turns out that there are others similarly minded, we might arrange for a meeting in London and see if we can knock the idea into feasible shape.

ARTHUR K. BULLEY.

*West Kirby, near Birkenhead.*

## WINTER AND SPRING PICTURES.

AWARD OF PRIZES.

First prize, 10 guineas, is awarded to Miss Willmott, Warley Place, Great Warley, Essex, for over 200 good photographs of beautiful gardens and plants.

Second prize, 5 guineas, to the Countess of Annesley, Castlewellan, Co. Down, Ireland.

Equal third prize, 3 guineas, to Mr. S. W. Fitzherbert, Lanscombe House, Torquay, and Mr. J. C. Smith, Nandana, Penrith.

EXTRA PRIZES.

Miss Gaisford, Offington, Worthing. *Xanthoceras sorbifolia*, group of Snowdrops, *Prinos glaber*.

Mr. E. H. Woodall, St. Nicholas House, Scarborough. *Narcissus princeps*, *Galanthus plicatus*, *Scilla campanulata*.

Mr. Thomas Allott, 110, Shaw Heath, Stockport. Two views of Tulips in Ashton Park.

Mr. C. Metcalf, Mill House, Halifax. *Rhododendron* Lady Alice Fitzwilliam, *Arabis montana*.  
Rev. D. J. Gerrard, The Rectory, Rathangan, Co. Kildare. Apple tree in bloom.















